



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We make Indiana a cleaner, healthier place to live.*

Frank O'Bannon  
Governor

Lori F. Kaplan  
Commissioner

June 24, 2003

100 North Senate Avenue  
P. O. Box 6015  
Indianapolis, Indiana 46206-6015  
(317) 232-8603  
(800) 451-6027  
[www.IN.gov/idem](http://www.IN.gov/idem)

TO: Interested Parties / Applicant

RE: Citation Bohn Aluminum Corp. 033-16754-00016

FROM: Paul Dubenetzky  
Chief, Permits Branch  
Office of Air Quality

## Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, ISTA Building, 150 W. Market Street, Suite 618, Indianapolis, IN 46204, **within (18) eighteen days of the mailing of this notice.** The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- (3) the date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- (1) the name and address of the person making the request;
- (2) the interest of the person making the request;
- (3) identification of any persons represented by the person making the request;
- (4) the reasons, with particularity, for the request;
- (5) the issues, with particularity, proposed for consideration at any hearing; and
- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.



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Mr. Scott Irons  
Citation Bohn Aluminum Corp.  
P.O. Box 80  
Butler, Indiana 46271

Re: 033-16754  
Fourth Significant Permit Revision to  
FESOP 033-7938-00016

Dear Mr. Irons:

Citation Bohn Aluminum was issued a FESOP on January 26, 1999 to operate the secondary aluminum foundry and die casting plant located at 6378 U.S. Highway 6 West, Butler, Indiana, 46721. A letter requesting a permit revision was received on January 31, 2003. Pursuant to the provisions of 326 IAC 2-8-11.1(f) a significant permit revision to this permit is hereby approved as described in the attached Technical Support Document.

The revision consists of the approved construction and operation of the following emission units and pollution control devices:

One (1) reverberatory melt furnace identified as A3 with a maximum melt capacity of 6.0 tons of aluminum per hour, to be installed in 2003, equipped with two (2) natural gas fired burners rated at 24.0 million British thermal units (MMBtu) per hour total, exhausting through one (1) stack identified as E-3.

This revision also includes the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) Aluminum pouring and casting operation for furnace A3, identified as FLCA, rated at 6.0 tons of melted aluminum per hour.
- (b) Sawing and trimming operations for furnace A3, processing up to 3.0 tons aluminum per hour, utilizing existing cyclones C1 and C2 for particulate matter control, exhausting respectively to stacks E14 and E15.
- (c) Thirteen (13) electric crucible holding furnaces.

The following construction conditions are applicable to the proposed project:

1. General Construction Conditions

The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).

2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
3. Effective Date of the Permit  
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.
4. Pursuant to 326 IAC 2-1.1-9 (Revocation), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

Pursuant to 326 IAC 2-8-11.1, this permit shall be revised by incorporating the significant permit revision into the permit. All other conditions of the permit shall remain unchanged and in effect. A copy of the revised permit is attached.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Michael Hirtler, c/o OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or at 973-575-2555, extension 3229, or in Indiana at 1-800-451-6027.

Sincerely,  
Original signed by Paul Dubenetzky

Paul Dubenetzky, Chief  
Permits Branch  
Office of Air Quality

Attachments

MH / EVP

c: File - DeKalb County  
U.S. EPA, Region V  
DeKalb County Health Department  
IDEM Northern Regional Office  
Air Compliance Section Inspector - Doyle Houser  
Compliance Data Section - Karen Ambil  
Administrative and Development  
Technical Support and Modeling - Michele Boner



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## FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) OFFICE OF AIR QUALITY

**Citation Bohn Aluminum Corporation  
6378 U.S. Highway 6 West  
Butler, Indiana 46721**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-8 and 326 IAC 2-1-3.2, as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: F033-7938-00016	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: January 26, 1999  Expiration Date: January 26, 2004

First Administrative Amendment: 033-14004-00016  
First Significant Permit Revision: 033-14732-00016  
Second Significant Permit Revision: 033-14858-00016  
Third Significant Permit Revision: 033-15396-00016

Issuance Date: May 14, 2001  
Issuance Date: October 29, 2001  
Issuance Date: January 4, 2002  
Issuance Date: August 7, 2002

Fourth Significant Permit Revision: 033-16754-00016	Pages Affected: 2-8, Section D.1, Section D.2, 49, and 50
Issued by: Original signed by Paul Dubenetzky Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: June 24, 2003

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## SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

### A.1 General Information [326 IAC 2-8-3(b)]

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The Permittee owns and operates a stationary secondary aluminum foundry and die casting operation plant.

Responsible Official:	General Manager
Source Address:	6378 U.S. Highway 6 West, Butler, Indiana 46721
Mailing Address:	P.O. Box 80, Butler, Indiana 46721
SIC Code:	3365,3363,3341
County Location:	DeKalb
County Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit (FESOP) Minor Source, under PSD Minor Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

### A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

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This stationary source consists of the following emission units and pollution control devices:

- (a) One (1) reverberatory melt furnace identified as A1 with a maximum melt capacity of 3.83 tons of aluminum per hour, to be installed in July 2002, equipped with four (4) natural gas fired burners rated at 9.2 million (MM) British thermal units (Btu) per hour total, exhausting through one (1) stack identified as E-1.
- (b) One (1) reverberatory melt furnace identified as A2 with a maximum melt capacity of 3.28 tons of aluminum per hour, to be installed in July 2002, equipped with three (3) natural gas fired burners rated at 7.86 MMBtu per hour total, exhausting through one (1) stack identified as E-2.
- (c) One (1) reverberatory melt furnace identified as A3 with a maximum melt capacity of 6.0 tons of aluminum per hour, to be installed in 2003, equipped with two (2) natural gas fired burners rated at 24.0 MMBtu per hour total, exhausting through one (1) stack identified as E-3.
- (d) One (1) reverberatory melt furnace identified as A4 with a maximum melt capacity of 1.25 tons of aluminum per hour, equipped with three (3) natural gas fired burners rated at 10.05 MMBtu per hour total, exhausting through one (1) stack identified as E-4.
- (e) One (1) reverberatory melt furnace identified as A5 with a maximum melt capacity of 1.25 tons of aluminum per hour, equipped with two (2) natural gas fired burners rated at 6.7 MMBtu per hour total, exhausting through one (1) stack identified as E-5.



- (f) One (1) reverberatory melt furnace identified as A6 with a maximum melt capacity of 1.25 tons of aluminum per hour, equipped with three (3) natural gas fired burners rated at 10.05 MMBtu per hour total, exhausting through one (1) stack identified as E-6.
- (g) One (1) reverberatory melt furnace identified as A7 with a maximum melt capacity of 1.0 ton of aluminum per hour, equipped with two (2) natural gas fired burners rated at 5.2 MMBtu per hour total, exhausting through one (1) stack identified as E-7.
- (h) One (1) reverberatory melt furnace identified as A8 with a maximum melt capacity of 0.25 tons of aluminum per hour, equipped with one (1) natural gas fired burner rated at 2.5 MMBtu per hour, exhausting through one (1) stack identified as E-8.
- (i) One (1) reverberatory melt furnace identified as A9 with a maximum melt capacity of 2.5 tons of aluminum per hour, equipped with four (4) natural gas fired burners rated at 10.6 MMBtu per hour total, exhausting through one (1) stack identified as E-9.
- (j) One (1) reverberatory melt furnace identified as A10 with a maximum melt capacity of 2.5 tons of aluminum per hour, equipped with six (6) natural gas fired burners rated at 9.0 MMBtu per hour total, exhausting through one (1) stack identified as E-10.
- (k) One (1) reverberatory melt furnace identified as A11 with a maximum melt capacity of 0.9 tons of aluminum per hour, equipped with six (6) natural gas fired burners rated at 15.9 MMBtu per hour total, exhausting through one (1) stack identified as E-11.
- (l) One (1) reverberatory melt furnace identified as A12 with a maximum melt capacity of 3.5 tons of aluminum per hour, installed in June 1998, equipped with two (2) natural gas fired burners rated at 12.5 million British thermal units (MMBtu) per hour total, exhausting through one (1) stack identified as E-12.
- (m) One (1) reverberatory melt furnace identified as A13 with a maximum melt capacity of 3.5 tons of aluminum per hour, installed in June 1998, equipped with two (2) natural gas fired burners rated at 12.5 MMBtu per hour total, exhausting through one (1) stack identified as E-13.

A.3 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-8-3(c)(1)]

This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour, as follows:
  - (1) Eighteen (18) natural gas-fired crucible holding furnaces, individually identified as HF1, HF2, HF15 through HF24, and HF28 through HF33, with a total combined maximum heat input rating of 9.5 MMBtu per hour;
  - (2) Four (4) natural gas-fired reverberatory holding furnaces, individually identified as S1, S2, S3, and S4, each with a maximum heat input rating of 5.8 MMBtu per hour;
  - (3) Two (2) natural gas-fired reverberatory holding furnaces, individually identified as H1 and H2, each with a maximum heat input rating of 1.48 MMBtu per hour and exhausting through one (1) stack identified as E-H; and

- (4) Two (2) natural gas-fired heat treat furnaces, individually identified as HT1 and HT2, each with a maximum heat input rating of 0.3 MMBTU per hour.
- (b) Combustion source flame safety purging pump.
- (c) Machining where an aqueous cutting coolant continuously floods the machining interface.
- (d) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6.
- (e) Noncontact cooling tower systems with forced and induced draft cooling tower system not regulated under a NESHAP.
- (f) Quenching operations used with heat treating processes.
- (g) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.
- (h) Heat exchanger cleaning and repair.
- (i) Process vessel degassing and cleaning to prepare for internal repairs.
- (j) Trimmers that do not produce fugitive emissions and that are equipped with a dust collection trim material recovery device such as a bag filter or cyclone, including:
  - (1) two (2) sawing and trimming operations for furnaces A1 through A13, excluding A3, individually identified as C-1 and C-2, processing up to a total of 3.8 tons aluminum per hour; and
  - (2) sawing and trimming operation for furnace A3 processing up to 3.0 tons aluminum per hour,utilizing two (2) cyclones for particulate matter control each exhausting through one (1) stack respectively identified as E-14 and E-15.
- (k) Paved and unpaved roads and parking lots with public access.
- (l) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.
- (m) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors, and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations.
- (n) Mold release agents using low volatile products (vapor pressure less than or equal to 2 kilopascals measured at 38 degrees Celsius).
- (o) A laboratory as defined in 326 IAC 2-7-1(21)(D).

- (p) Other activities and categories with PM/PM10 emissions below the insignificant thresholds of five (5) pounds per hour or twenty-five (25) pounds per day:
  - (1) Aluminum pouring and casting operations for furnaces A1 through A11, excluding A3, rated at 18.01 tons of melted aluminum per hour.
  - (2) Aluminum pouring and casting operation for furnace A3, identified as FLCA, rated at 6.0 tons of melted aluminum per hour.
  - (3) Aluminum pouring and casting operation for furnaces A12 and A13, identified as ME Cell, rated at 7.0 tons of melted aluminum per hour.
- (q) Twenty-three (23) electric crucible holding furnaces identified as HF3 - HF7a, HF7b, HF8 - HF14, and HF34 through HF43.

**A.4 FESOP Applicability [326 IAC 2-8-2]**

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This stationary source, otherwise required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) for a Federally Enforceable State Operating Permit (FESOP).

**A.5 Prior Permit Conditions**

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- (a) This permit shall be used as the primary document for determining compliance with applicable requirements established by previously issued permits.
- (b) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, including any term or condition from a previously issued construction or operation permit, IDEM, OAQ, shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued.

## **SECTION B                      GENERAL CONDITIONS**

### **B.1      Permit No Defense [326 IAC 2-1-10] [IC 13]**

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Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a FESOP under 326 IAC 2-8.

### **B.2      Definitions [326 IAC 2-8-1]**

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Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in IC 13-11, 326 IAC 1-2, and 326 IAC 2-7 shall prevail.

### **B.3      Permit Term [326 IAC 2-8-4(2)]**

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This permit is issued for a fixed term of five (5) years from the effective date, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3.

### **B.4      Enforceability [326 IAC 2-8-6]**

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- (a) All terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM.
- (b) Unless otherwise stated, terms and conditions of this permit, including any provisions to limit the source's potential to emit, are enforceable by the United States Environmental Protection Agency (U.S. EPA) and citizens under the Clean Air Act.

### **B.5      Termination of Right to Operate [326 IAC 2-8-9] [326 IAC 2-8-3(h)]**

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The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-8-3(h) and 326 IAC 2-8-9.

### **B.6      Severability [326 IAC 2-8-4(4)]**

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The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

### **B.7      Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]**

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This permit does not convey any property rights of any sort, or any exclusive privilege.

### **B.8      Duty to Supplement and Provide Information [326 IAC 2-8-3(f)] [326 IAC 2-8-4(5)(E)]**

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- (a) The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

- (b) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ, may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit.

- (c) Upon request, the Permittee shall also furnish to IDEM, OAQ, copies of records required to be kept by this permit. If the Permittee wishes to assert a claim of confidentiality over any of the furnished records, the Permittee must furnish such records to IDEM, OAQ, along with a claim of confidentiality under 326 IAC 17. If requested by IDEM, OAQ, or the U.S. EPA, the Permittee must furnish such confidential records directly to the U.S. EPA along with a claim of confidentiality under 40 CFR 2, Subpart B.

Such confidentiality claim shall meet the requirements of 40 CFR 2, Subpart B (when submitting to U.S. EPA) and 326 IAC 17 (when submitting to IDEM, OAQ).

**B.9 Compliance Order Issuance [326 IAC 2-8-5(b)]**

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IDEM, OAQ may issue a compliance order to this Permittee upon discovery that this permit is in nonconformance with an applicable requirement. The order may require immediate compliance or contain a schedule for expeditious compliance with the applicable requirement.

**B.10 Compliance with Permit Conditions [326 IAC 2-8-4(5)(A)] [326 IAC 2-8-4(5)(B)]**

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- (a) The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit constitutes a violation of the Clean Air Act and is grounds for:
  - (1) Enforcement action;
  - (2) Permit termination, revocation and reissuance, or modification; and
  - (3) Denial of a permit renewal application.
- (b) It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

**B.11 Certification [326 IAC 2-8-3(d)] [326 IAC 2-8-4(3)(C)(i)] [326 IAC 2-8-5(1)]**

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- (a) Any application form, report, or compliance certification submitted under this permit shall contain certification by a responsible official of truth, accuracy, and completeness. This certification, and any other certification required under this permit, shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, on the attached Certification Form, with each submittal.
- (c) A responsible official is defined at 326 IAC 2-7-1(34).

**B.12 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]**

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- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. The certification shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in letter form no later than July 1 of each year to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

and

United States Environmental Protection Agency, Region V  
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

- (b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (c) The annual compliance certification report shall include the following:
  - (1) The identification of each term or condition of this permit that is the basis of the certification;
  - (2) The compliance status;
  - (3) Whether compliance was continuous or intermittent;
  - (4) The methods used for determining compliance of the source, currently and over the reporting period consistent with 326 IAC 2-8-4(3); and
  - (5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ, may require to determine the compliance status of the source.

The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

**B.13 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)] [326 IAC 2-8-5(a)(1)]**

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- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) within ninety (90) days after issuance of this permit, including the following information on each facility:
  - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
  - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions;
  - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If due to circumstances beyond its control, the PMP cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

- (b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that lack of proper maintenance does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) PMP's shall be submitted to IDEM, OAQ, upon request and shall be subject to review and approval by IDEM, OAQ.

**B.14 Emergency Provisions [326 IAC 2-8-12]**

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- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation, except as provided in 326 IAC 2-8-12.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describes the following:
  - (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
  - (2) The permitted facility was at the time being properly operated;
  - (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
  - (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone No.: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section)  
or,  
Telephone No.: 317-233-5674 (ask for Compliance Section)  
Facsimile No.: 317-233-5967

- (5) For each emergency lasting one (1) hour or more, the Permittee submitted notice either in writing or facsimile, of the emergency to:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-8-4(3)(C)(ii) and must contain the following:

- (A) A description of the emergency;

(B) Any steps taken to mitigate the emissions; and

(C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(6) The Permittee immediately took all reasonable steps to correct the emergency.

(c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

(d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions) for sources subject to this rule after the effective date of this rule. This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.

(e) IDEM, OAQ, may require that the Preventive Maintenance Plans required under 326 IAC 2-8-3(c)(6) be revised in response to an emergency.

(f) Failure to notify IDEM, OAQ, by telephone or facsimile of an emergency lasting more than one (1) hour in compliance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-8 and any other applicable rules.

(g) Operations may continue during an emergency only if the following conditions are met:

(1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

(2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:

(A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and

(B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

Any operations shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

**B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)]**

(a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provision), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015



within ten (10) calendar days from the date of the discovery of the deviation.

- (b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit or a rule. It does not include:
- (1) An excursion from compliance monitoring parameters as identified in Section D of this permit unless tied to an applicable rule or limit; or
  - (2) An emergency as defined in 326 IAC 2-7-1(12); or
  - (3) Failure to implement elements of the Preventive Maintenance Plan unless lack of maintenance has caused or contributed to a deviation.
  - (4) Failure to make or record information required by the compliance monitoring provisions of Section D unless such failure exceeds 5% of the required data in any calendar quarter.

A Permittee's failure to take the appropriate response step when an excursion of a compliance monitoring parameter has occurred is a deviation.

- (c) Written notification shall be submitted on the attached Emergency/Deviation Occurrence Reporting Form or its substantial equivalent. The notification does not need to be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (d) Proper notice submittal under 326 IAC 2-7-16 satisfies the requirement of this subsection.

**B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination**

[326 IAC 2-8-4(5)(C)] [326 IAC 2-8-7(a)] [326 IAC 2-8-8]

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- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a FESOP modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-8-4(5)(C)]
- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:
- (1) That this permit contains a material mistake.
  - (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
  - (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-8-8(a)]
- (c) Proceedings by IDEM, OAQ, to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-8-8(b)]

- (d) The reopening and revision of this permit, under 326 IAC 2-8-8(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ, at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ, may provide a shorter time period in the case of an emergency. [326 IAC 2-8-8(c)]

**B.17 Permit Renewal [326 IAC 2-8-3(h)]**

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- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ, and shall include the information specified in 326 IAC 2-8-3. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, IN 46206-6015

- (b) Timely Submittal of Permit Renewal [326 IAC 2-8-3]
  - (1) A timely renewal application is one that is:
    - (A) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
    - (B) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due. [326 IAC 2-5-3]
  - (2) If IDEM, OAQ upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect until the renewal permit has been issued or denied.
- (c) Right to Operate After Application for Renewal [326 IAC 2-8-9]

If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-8 until IDEM, OAQ, takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ, any additional information identified as needed to process the application.

**B.18 Permit Amendment or Modification [326 IAC 2-8-10] [326 IAC 2-8-11]**

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- (a) The Permittee must comply with the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11 whenever the Permittee seeks to amend or modify this permit.

- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

Any such application should be certified by the "responsible official" as defined by 326 IAC 2-7-1(34) only if a certification is required by the terms of the applicable rule.

- (c) The Permittee may implement the administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

**B.19 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-8-11(b)(2)]**

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Notwithstanding 326 IAC 2-8-11(b)(1)(D)(i) and 326 IAC 2-8-11(c)(1), minor permit modification procedures may be used for modifications of this permit involving the use of economic incentives, marketable permits, emissions trading, and other similar approaches to the extent that such minor permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated by U.S. EPA.

**B.20 Changes Under Section 502(b)(10) of the Clean Air Act [326 IAC 2-8-15(b)]**

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The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-8-15(a) and the following additional condition:

For each such change, the required written notification shall include a brief description of the change within the source, the date on which the change will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change.

**B.21 Operational Flexibility [326 IAC 2-8-15]**

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- (a) The Permittee may make any change or changes at this source that are described in 326 IAC 2-8-15(b) through (d), without prior permit revision, if each of the following conditions is met:

- (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
- (2) Any approval required by 326 IAC 2-1 has been obtained;
- (3) The changes do not result in emissions which exceed the emissions allowable under this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
- (4) The Permittee notifies the:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

and

United States Environmental Protection Agency, Region V  
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

- (5) The Permittee maintains records on-site which document, on a rolling five (5) year basis, all such changes and emissions trading that are subject to 326 IAC 2-8-15(b) through (d) and makes such records available, upon reasonable request, to public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ, in the notices specified in 326 IAC 2-8-15(b), (c)(1), and (d).

- (b) For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:
- (1) A brief description of the change within the source;
  - (2) The date on which the change will occur;
  - (3) Any change in emissions; and
  - (4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) Emission Trades [326 IAC 2-8-15(c)]  
The Permittee may trade increases and decreases in emissions in the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(c).
- (d) Alternative Operating Scenarios [326 IAC 2-8-15(d)]  
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(7). No prior notification of IDEM, OAQ, or U.S. EPA is required.
- (e) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

**B.22 Construction Permit Requirement [326 IAC 2]**

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Except as allowed by Indiana P.L. 130-1996 Section 12, as amended by P.L. 244-1997, modification, construction, or reconstruction shall be approved as required by and in accordance with 326 IAC 2.

**B.23 Inspection and Entry [326 IAC 2-8-5(a)(2)]**

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Upon presentation of proper identification cards, credentials, and other documents as may be required by law, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a FESOP source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.  
[326 IAC 2-8-5(a)(4)]
  - (1) The Permittee may assert a claim that, in the opinion of the Permittee, information removed or about to be removed from the source by IDEM, OAQ, or an authorized representative, contains information that is confidential under IC 5-14-3-4(a). The claim shall be made in writing before or at the time the information is removed from the source. In the event that a claim of confidentiality is so asserted, neither IDEM, OAQ, nor an authorized representative, may disclose the information unless and until IDEM, OAQ, makes a determination under 326 IAC 17-1-7 through 326 IAC 17-1-9 that the information is not entitled to confidential treatment and that determination becomes final. [IC 5-14-3-4; IC 13-14-11-3; 326 IAC 17-1-7 through 326 IAC 17-1-9]
  - (2) The Permittee, *and* IDEM, OAQ, acknowledge that the federal law applies to claims of confidentiality made by the Permittee with regard to information removed or about to be removed from the source by U.S. EPA. [40 CFR Part 2, Subpart B]

**B.24 Transfer of Ownership or Operation [326 IAC 2-1-6] [326 IAC 2-8-10]**

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Pursuant to 326 IAC 2-1-6 and 2-8-10:

- (a) In the event that ownership of this source is changed, the Permittee shall notify IDEM, OAQ, Permits Branch, within thirty (30) days of the change. Notification shall include a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current Permittee and the new owner.
- (b) The written notification shall be sufficient to transfer the permit to the new owner by an administrative amendment pursuant to 326 IAC 2-8-10. The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) IDEM, OAQ shall reserve the right to issue a new permit.

**B.25 Annual Fee Payment [326 IAC 2-8-4(6)] [326 IAC 2-8-16]**

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- (a) The Permittee shall pay annual fees to IDEM, OAQ, within thirty (30) calendar days of receipt of a billing. If the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.
- (b) Failure to pay may result in administrative enforcement action, or revocation of this permit.
- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-0425 (ask for OAQ, Technical Support and Modeling Section), to determine the appropriate permit fee.

## SECTION C SOURCE OPERATION CONDITIONS

Entire Source
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### Emissions Limitations and Standards [326 IAC 2-8-4(1)]

#### C.1 Overall Source Limit [326 IAC 2-8]

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

(a) Pursuant to 326 IAC 2-8:

- (1) The potential to emit any regulated pollutant from the entire source shall be limited to less than one-hundred (100) tons per three hundred sixty-five (365) consecutive day period. This limitation shall also make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.
- (2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per three hundred sixty-five (365) consecutive day period; and
- (3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per three hundred sixty-five (365) consecutive day period.

(b) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided that the source's potential to emit does not exceed the above specified limits.

(c) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

#### C.2 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [40 CFR 52 Subpart P][326 IAC 6-3-2]

- (a) Pursuant to 40 CFR 52 Subpart P, particulate matter emissions from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour.
- (b) Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour. This condition is not federally enforceable.

#### C.3 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Visible Emissions Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), visible emissions shall meet the following, unless otherwise stated in this permit:

- (a) Visible emissions shall not exceed an average of forty percent (40%) opacity in twenty-four (24) consecutive readings, as determined in 326 IAC 5-1-4.

- (b) Visible emissions shall not exceed sixty percent (60%) opacity for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) in a six (6) hour period.

**C.4 Open Burning [326 IAC 4-1] [IC 13-17-9]**

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The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

**C.5 Incineration [326 IAC 4-2][326 IAC 9-1-2]**

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The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2.

**C.6 Fugitive Dust Emissions [326 IAC 6-4]**

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The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

**C.7 Operation of Equipment [326 IAC 2-8-5(a)(4)]**

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All air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission unit vented to the control equipment is in operation.

**C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61.140]**

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- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.
- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
  - (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
  - (2) If there is a change in the following:
    - (A) Asbestos removal or demolition start date;
    - (B) Removal or demolition contractor; or
    - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).



- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management  
Asbestos Section, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

The notifications do not require a certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (e) Procedures for Asbestos Emission Control  
The Permittee shall comply with the emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-4 emission control requirements are mandatory for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) Indiana Accredited Asbestos Inspector  
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement that the inspector be accredited is federally enforceable.

### **Testing Requirements [326 IAC 2-8-4(3)]**

#### **C.9 Performance Testing [326 IAC 3-6]**

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- (a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing methods approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above address so that it is received at least two weeks prior to the test date.

- (b) All test reports must be received by IDEM, OAQ within forty-five (45) days after the completion of the testing. An extension may be granted by the Commissioner, if the source submits to IDEM, OAQ, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

## **Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]**

### **C.10 Compliance Monitoring [326 IAC 2-8-4(3)] [326 IAC 2-8-5(a)(1)]**

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Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment, no more than ninety (90) days after receipt of this permit. If due to circumstances beyond its control, this schedule cannot be met, the Permittee may extend the compliance schedule an additional ninety (90) days provided the Permittee notify:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

### **C.11 Monitoring Methods [326 IAC 3]**

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Any monitoring or testing performed to meet the applicable requirements of this permit shall be performed, according to the provisions of 326 IAC 3, or 40 CFR 60, Appendix A, or other approved methods as specified in this permit.

## **Corrective Actions and Response Steps [326 IAC 2-8-4] [326 IAC 2-8-5]**

### **C.12 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68.215]**

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If a regulated substance, subject to 40 CFR 68, is present in a process in more than the threshold quantity, 40 CFR 68 is an applicable requirement and the Permittee shall:

- (a) Submit:
  - (1) A compliance schedule for meeting the requirements of 40 CFR 68 by the date provided in 40 CFR 68.10(a); or
  - (2) As a part of the compliance certification submitted under 326 IAC 2-7-6(5), a certification statement that the source is in compliance with all the requirements of 40 CFR 68, including the registration and submission of a Risk Management Plan (RMP); and
  - (3) A verification to IDEM, OAQ, that a RMP or a revised plan was prepared and submitted as required by 40 CFR 68.
- (b) Provide annual certification to IDEM, OAQ, that the Risk Management Plan is being properly implemented.

All documents submitted pursuant to this condition shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

C.13 Compliance Monitoring Plan - Failure to Take Response Steps [326 IAC 2-8-4]  
[326 IAC 2-8-5][326 IAC 1-6]

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- (a) The Permittee is required to implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. This compliance monitoring plan is comprised of:
  - (1) This condition;
  - (2) The Compliance Determination Requirements in Section D of this permit;
  - (3) The Compliance Monitoring Requirements in Section D of this permit;
  - (4) The Record Keeping and Reporting Requirements in Section C (Monitoring Data Availability, General Record Keeping Requirements, and General Reporting Requirements) and in Section D of this permit; and
  - (5) A Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. CRP's shall be submitted to IDEM, OAQ, upon request and shall be subject to review and approval by IDEM, OAQ. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee and maintained on site, and is comprised of:
    - (A) Response steps that will be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this permit; and
    - (B) A time schedule for taking such response steps including a schedule for devising additional response steps for situations that may not have been predicted.
- (b) For each compliance monitoring condition of this permit, appropriate response steps shall be taken when indicated by the provisions of that compliance monitoring condition. Failure to perform the actions detailed in the compliance monitoring conditions or failure to take the response steps within the time prescribed in the Compliance Response Plan, shall constitute a violation of the permit unless taking the response steps set forth in the Compliance Response Plan would be unreasonable.
- (c) After investigating the reason for the excursion, the Permittee is excused from taking further response steps for any of the following reasons:
  - (1) The monitoring equipment malfunctioned, giving a false reading. This shall be an excuse from taking further response steps providing that prompt action was taken to correct the monitoring equipment.
  - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied or;
  - (3) An automatic measurement was taken when the process was not operating; or
  - (4) The process has already returned to operating within "normal" parameters and no response steps are required.

- (d) Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.

**C.14 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4]  
[326 IAC 2-8-5]**

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- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate corrective actions. The Permittee shall submit a description of these corrective actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize emissions from the affected facility while the corrective actions are being implemented. IDEM, OAQ shall notify the Permittee within thirty (30) days, if the corrective actions taken are deficient. The Permittee shall submit a description of additional corrective actions taken to IDEM, OAQ within thirty (30) days of receipt of the notice of deficiency. IDEM, OAQ reserves the authority to use enforcement activities to resolve noncompliant stack tests.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline. Failure of the second test to demonstrate compliance with the appropriate permit conditions may be grounds for immediate revocation of the permit to operate the affected facility.

The documents submitted pursuant to this condition do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

**Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]**

**C.15 Monitoring Data Availability [326 IAC 2-8-4(3)] [326 IAC 2-8-5(1)]**

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- (a) With the exception of performance tests conducted in accordance with Section C- Performance Testing, all observations, sampling, maintenance procedures, and record keeping, required as a condition of this permit shall be performed at all times the equipment is operating at normal representative conditions.
- (b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this permit is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this permit.
- (c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.
- (d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.
- (e) At its discretion, IDEM may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.

- (f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements stated in (a) above.

**C.16 General Record Keeping Requirements [326 IAC 2-8-4(3)][326 IAC 2-8-5]**

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- (a) Records of all required monitoring data and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years and available upon the request of an IDEM, OAQ, representative, for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner (or local agency) makes a written request for records to the Permittee, the Permittee shall furnish the records to the Commissioner or local agency within a reasonable time.
- (b) Records of required monitoring information shall include, where applicable:
  - (1) The date, place, and time of sampling or measurements;
  - (2) The dates analyses were performed;
  - (3) The company or entity performing the analyses;
  - (4) The analytic techniques or methods used;
  - (5) The results of such analyses; and
  - (6) The operating conditions existing at the time of sampling or measurement.
- (c) Support information shall include, where applicable:
  - (1) Copies of all reports required by this permit;
  - (2) All original strip chart recordings for continuous monitoring instrumentation;
  - (3) All calibration and maintenance records;
  - (4) Records of preventive maintenance shall be sufficient to demonstrate that improper maintenance did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. Records of response steps taken shall indicate whether the response steps were performed in accordance with the Compliance Response Plan required by Section C - Compliance Monitoring Plan - Failure to take Response Steps, of this permit, and whether a deviation from a permit condition was reported. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks.
- (d) All record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

**C.17 General Reporting Requirements [326 IAC 2-8-4(3)(C)]**

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- (a) To affirm that the source has met all the compliance monitoring requirements stated in this permit the source shall submit a Quarterly Compliance Monitoring Report. Any deviation from the requirements and the date(s) of each deviation must be reported.
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:  
  
Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (d) Unless otherwise specified in this permit, any quarterly report shall be submitted within thirty (30) days of the end of the reporting period.
- (e) All instances of deviations as described in Section B- Deviations from Permit Requirements Conditions must be clearly identified in such reports.
- (f) Any corrective actions or response steps taken as a result of each deviation must be clearly identified in such reports.
- (g) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period.

The documents submitted pursuant to this condition do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

**Stratospheric Ozone Protection**

**C.18 Compliance with 40 CFR 82 and 326 IAC 22-1**

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Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with the standards for recycling and emissions reduction:

- (a) Persons opening appliances for maintenance, service, repair or disposal must comply with the required practices pursuant to 40 CFR 82.156
- (b) Equipment used during the maintenance, service, repair or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- (c) Persons performing maintenance, service, repair or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

## SECTION D.1

## FACILITY OPERATION CONDITIONS

### Facility Descriptions [326 IAC 2-8-4(10)]:

- (a) One (1) reverberatory melt furnace identified as A1 with a maximum melt capacity of 3.83 tons of aluminum per hour, to be installed in July 2002, equipped with four (4) natural gas fired burners rated at 9.2 million British thermal units (MMBtu) per hour total, exhausting through one (1) stack identified as E1.
- (b) One (1) reverberatory melt furnace identified as A2 with a maximum melt capacity of 3.28 tons of aluminum per hour, to be installed in July 2002, equipped with three (3) natural gas fired burners rated at 7.86 million British thermal units (MMBtu) per hour total, exhausting through one (1) stack identified as E2.
- (c) One (1) reverberatory melt furnace identified as A3 with a maximum melt capacity of 6.0 tons of aluminum per hour, to be installed in 2003, equipped with two (2) natural gas fired burners rated at 24.0 MMBtu per hour total, exhausting through one (1) stack identified as E-3.
- (d) One (1) reverberatory melt furnace identified as A4 with a maximum melt capacity of 1.25 tons of aluminum per hour, equipped with three (3) natural gas fired burners rated at 10.05 MMBtu per hour total, exhausting through one (1) stack identified as E-4.
- (e) One (1) reverberatory melt furnace identified as A5 with a maximum melt capacity of 1.25 tons of aluminum per hour, equipped with two (2) natural gas fired burners rated at 6.7 MMBtu per hour total, exhausting through one (1) stack identified as E-5.
- (f) One (1) reverberatory melt furnace identified as A6 with a maximum melt capacity of 1.25 tons of aluminum per hour, equipped with three (3) natural gas fired burners rated at 10.05 MMBtu per hour total, exhausting through one (1) stack identified as E-6.
- (g) One (1) reverberatory melt furnace identified as A7 with a maximum melt capacity of 1.0 ton of aluminum per hour, equipped with two (2) natural gas fired burners rated at 5.2 MMBtu per hour total, exhausting through one (1) stack identified as E-7.
- (h) One (1) reverberatory melt furnace identified as A8 with a maximum melt capacity of 0.25 tons of aluminum per hour, equipped with one (1) natural gas fired burner rated at 2.5 MMBtu per hour, exhausting through one (1) stack identified as E-8.
- (i) One (1) reverberatory melt furnace identified as A9 with a maximum melt capacity of 2.5 tons of aluminum per hour, equipped with four (4) natural gas fired burners rated at 10.6 MMBtu per hour total, exhausting through one (1) stack identified as E-9.
- (j) One (1) reverberatory melt furnace identified as A10 with a maximum melt capacity of 2.5 tons of aluminum per hour, equipped with six (6) natural gas fired burners rated at 9.0 MMBtu per hour total, exhausting through one (1) stack identified as E-10.
- (k) One (1) reverberatory melt furnace identified as A11 with a maximum melt capacity of 0.9 tons of aluminum per hour, equipped with six (6) natural gas fired burners rated at 15.9 MMBtu per hour total, exhausting through one (1) stack identified as E-11.
- (l) One (1) reverberatory melt furnace identified as A12 with a maximum melt capacity of 3.5 tons of aluminum per hour, installed in June 1998, equipped with two (2) natural gas fired burners rated at 12.5 million British thermal units (MMBtu) per hour total, exhausting through one (1) stack identified as E-12.
- (m) One (1) reverberatory melt furnace identified as A13 with a maximum melt capacity of 3.5 tons of aluminum per hour, installed in June 1998, equipped with two (2) natural gas fired burners rated at 12.5 MMBtu per hour total, exhausting through one (1) stack identified as E-13.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

## **Emission Limitations and Standards [326 IAC 2-8-4(1)]**

### **D.1.1 PSD Minor and FESOP Limits [326 IAC 2-2] [326 IAC 2-8]**

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The source shall limit the total aluminum production in reverberatory melt furnaces A1 through A13 as follows:

- (a) The total aluminum produced in reverberatory furnaces A2, A3, A4, A6, A7, A8, A10, A11, and A12 shall not exceed 30,474 tons per twelve (12) consecutive month period with compliance demonstrated at the end of each month, based on the following:

- (1) PM emissions from each furnace shall not exceed 4.3 pounds of PM emitted per ton of metal produced which includes the aluminum refining (i.e., flux addition) stage at the end of the melt cycle; and
- (2) PM-10 emissions from each furnace shall not exceed 2.6 pounds of PM-10 emitted per ton of metal produced which includes the aluminum refining (i.e., flux addition) stage at the end of the melt cycle.

This material usage limit is equivalent to limiting PM and PM10 emissions to 65.52 and 39.62 tons per year, respectively.

- (b) The total aluminum produced in reverberatory furnaces A1, A5, A9, and A13 shall not exceed 15,942 tons per twelve (12) consecutive month period with compliance demonstrated at the end of each month, based on the following:

- (1) PM emissions from each furnace shall not exceed 3.0 pounds of PM emitted per ton of metal produced which includes the aluminum refining (i.e., flux addition) stage at the end of the melt cycle; and
- (2) PM-10 emissions from each furnace shall not exceed 2.6 pounds of PM-10 emitted per ton of metal produced which includes the aluminum refining (i.e., flux addition) stage at the end of the melt cycle.

This material usage limit is equivalent to limiting PM and PM10 emissions to 23.91 and 20.72 tons per year, respectively.

- (c) These usage limits are required to limit the source-wide potential to emit both PM and PM-10 to less than 100 tons per twelve (12) consecutive month period. Compliance with this condition shall satisfy the requirements of 326 IAC 2-8-4 and also make the requirements of 326 IAC 2-2 not applicable.

### **D.1.2 Hazardous Air Pollutants (HAPs) [326 IAC 2-8][40 CFR 63, Subpart RRR]**

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The flux usage in furnaces A1 through A13 shall be limited as follows:

- (a) For chlorine-based fluxing:

- (1) The total hexachloroethane input usage at furnaces A1 through A13 shall not exceed 21,645 pounds per twelve (12) consecutive month period with compliance demonstrated at the end of each month.



- (2) Hydrochloric acid (HCl) emissions from each furnace shall not exceed 0.924 pounds of HCl emitted per pound of hexachloroethane used, based on complete chemical conversion of chlorine in the hexachloroethane to HCl emitted.

This material usage limit is equivalent to limiting single HAP (as HCl) emissions to less than 10 tons per year.

(b) For fluorine-based fluxing:

- (1) The total SF-350 type flux input usage at furnaces A1 through A13 shall not exceed 82,425 pounds per twelve (12) consecutive month period with compliance demonstrated at the end of each month.
- (2) Hydrogen fluoride (HF) emissions from each furnace shall not exceed 0.2276 pounds of HF emitted per pound of flux used, based on a maximum of 21.614 weight percent fluorine in the flux and complete chemical conversion of fluorine in the flux to HF emitted. Any change that increases the fluorine content in the flux shall require OAQ approval prior to making such a change.

This material usage limit is equivalent to limiting single HAP (as HF) emissions to less than 10 tons per year.

- (c) These usage limits are required to limit the potential to emit of a single HAP to less than 10 tons per twelve (12) consecutive month period. Compliance with (a) and (b) of this condition shall also limit the source-wide potential to emit combined HAPs to less than 25 tons per 12 consecutive month period. Compliance with this condition shall satisfy the requirements of 326 IAC 2-8-4 and the area source definition of 40 CFR 63, Subpart A.

#### D.1.3 Particulate [326 IAC 6-3-2]

- (a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the facilities shall be limited as follows:
  - (1) The facility identified as A1 shall not exceed 10.08 pounds per hour when operating at a process weight rate of 3.83 tons per hour.
  - (2) The facility identified as A2 shall not exceed 9.09 pounds per hour when operating at a process weight rate of 3.28 tons per hour.
  - (3) The facility identified as A3 shall not exceed 13.62 pounds per hour when operating at a process weight rate of 6.0 tons per hour.
  - (4) The facility identified as A4 shall not exceed 4.76 pounds per hour when operating at a process weight rate of 1.25 tons per hour.
  - (5) The facility identified as A5 shall not exceed 4.76 pounds per hour when operating at a process weight rate of 1.25 tons per hour..
  - (6) The facility identified as A6 shall not exceed 4.76 pounds per hour when operating at a process weight rate of 1.25 tons per hour.

- (7) The facility identified as A7 shall not exceed 4.10 pounds per hour when operating at a process weight rate of 1.0 tons per hour.
- (8) The facility identified as A8 shall not exceed 1.08 pounds per hour when operating at a process weight rate of 0.25 tons per hour.
- (9) The facility identified as A9 shall not exceed 7.58 pounds per hour when operating at a process weight rate of 2.5 tons per hour.
- (10) The facility identified as A10 shall not exceed 7.58 pounds per hour when operating at a process weight rate of 2.5 tons per hour.
- (11) The facility identified as A11 shall not exceed 3.82 pounds per hour when operating at a process weight rate of 0.9 tons per hour.
- (12) The facility identified as A12 shall not exceed 9.49 pounds per hour when operating at a process weight rate of 3.5 tons per hour.
- (13) The facility identified as A13 shall not exceed 9.49 pounds per hour when operating at a process weight rate of 3.5 tons per hour.
- (b) The pounds per hour allowable particulate emission rates were calculated with the following equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour; and  
P = process weight rate in tons per hour

#### D.1.4 General Provisions Relating to NESHAP [326 IAC 20-1][40 CFR Part 63, Subpart A]

The provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 20-1, apply to the furnaces except when otherwise specified in 40 CFR Part 63, Subpart RRR. These requirements become applicable to all Group 1 reverberatory furnaces, excluding A3, on March 24, 2003. These requirements become applicable to reverberatory furnaces A3 upon startup. Compliance with D.1.2 makes this source an area source under Clean Air Act Section 112. Therefore, only the area source requirements of Subpart RRR apply to these facilities.

#### D.1.5 Part 70 Permit Application [40 CFR Part 63.1500 (Subpart RRR)][326 IAC 2-7-4(a)]

Pursuant to 40 CFR 63.1500(e) and 326 IAC 2-7-4(a), the Permittee shall apply for a Part 70 operating permit no later than December 9, 2005.

#### D.1.6 Secondary Aluminum Smelting Limits [40 CFR Part 63.1500 (Subpart RRR)]

Effective March 23, 2004 for reverberatory furnaces A1, A2, and A4 through A13, and upon startup for reverberatory furnace A3, and pursuant to 40 CFR 63.1505(k)(3) and (5), the Permittee shall comply with the following emission limitations:

- (a) The Permittee shall not discharge or allow to be discharged to the atmosphere any 3-day, 24-hour rolling average emissions of total tetra-, penta-, hexa-, and octachlorinated dibenzo dioxins and furans (D/F) in excess of:

$$L_{cDF} = \frac{\sum_{i=1}^n (L_{iDF} T_{ii})}{\sum_{i=1}^n T_{ii}}$$

where  $L_{iDF}$  = The D/F emission limit for individual emission unit in the secondary aluminum processing unit; and

$L_{cDF}$  = The D/F emission limit for secondary aluminum processing unit.

The D/F emission limit ( $L_{cDF}$ ) for a Group 1 furnace without an in-line fluxer (reverberatory furnaces A1 through A13) at a secondary aluminum production facility shall be 15 Fg of D/F TEQ per Mg ( $2.1 \times 10^{-4}$  gr of D/F TEQ per ton) per ton of feed/charge or per ton of aluminum produced. Where TEQ is the toxicity equivalents for dioxins and furans as defined in "Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxins and -Dibenzofurans (CDDs and CDFs) and 1989 Update". [40 CFR 63.1503][40 CFR 63.1505(i)][40 CFR 63.1505(k)]

- (b) Identification, emission limits and means of compliance shall be posted on each furnace.

#### D.1.7 Labeling [40 CFR Part 63.1506(b)]

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The Permittee shall provide and maintain easily visible labels that shall be posted at the each furnace. Said labels shall identify the applicable emission limits and means of compliance, including:

- (a) The type of affected source or emission unit (e.g., group 1 furnace, group 2 furnace, in-line fluxer); and
- (b) The applicable operational standard(s) and control method(s) (work practice or control device). This includes, but is not limited to, the type of charge to be used for a furnace (e.g., clean scrap only, all scrap, etc.), flux materials and addition practices, and the applicable operating parameter ranges and requirements as incorporated in the OM&M plan.

#### D.1.8 Operation, Maintenance, and Monitoring (OM&M) Plan [40 CFR Part 63.1510(b)]

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The Permittee shall prepare and implement a written Operation, Maintenance, and Monitoring (OM&M) plan for each furnace and shall submit the plan to IDEM, OAQ, for review and approval. The OM&M plan shall be submitted by the compliance date established at § 63.1501(a) for the existing furnaces, and within ninety (90) days of the successful initial performance test for new furnace A3. Any subsequent changes to the plan shall be submitted to IDEM, OAQ, for review and approval. Pending approval of the initial or amended plan, the Permittee shall comply with the conditions of the submitted plan. The plan shall include the following information [63.1510(b)]:

- (a) Process and control device parameters to be monitored to determine compliance, along with established operating levels or ranges, as applicable, for each process and control device.

- (b) A monitoring schedule for each affected source and emission unit.
- (c) Procedures for the proper operation and maintenance of each process unit and add-on control device used to meet the applicable emission limits or standards in § 63.1505.
- (d) Procedures for the proper operation and maintenance of monitoring devices or systems used to determine compliance, including:
  - (1) Calibration and certification of accuracy of each monitoring device, at least once every 6 months, according to the manufacturer's instructions; and
  - (2) Procedures for the quality control and quality assurance of continuous emission or opacity monitoring systems as required by the general provisions in subpart A of this part.
- (e) Procedures for monitoring process and control device parameters, including procedures for annual inspections of afterburners, and if applicable, the procedure to be used for determining charge/feed (or throughput) weight if a measurement device is not used.
- (f) Corrective actions to be taken when process or operating parameters or add-on control device parameters deviate from the value or range established in paragraph (b)(1) of this section, including:
  - (1) Procedures to determine and record the cause of an deviation or excursion, and the time the deviation or excursion began and ended; and
  - (2) Procedures for recording the corrective action taken, the time corrective action was initiated, and the time/date corrective action was completed.
- (g) A maintenance schedule for each process and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.
- (h) Documentation of the work practice and pollution prevention measures used to achieve compliance with the applicable emission limits and a site-specific monitoring plan as required in § 63.1510(o) for each group 1 furnace not equipped with an add-on air pollution control device (i.e., furnaces A1 through A13).

#### D.1.9 Site-Specific Monitoring Plan [40 CFR Part 63.1510(o)]

The Permittee shall develop, in consultation with IDEM, OAQ, a written site-specific monitoring plan for each furnace not equipped with an add-on air pollution control device (i.e., reverberatory furnaces A1 through A13). The site-specific monitoring plan shall be submitted to IDEM, OAQ, as part of the OM&M plan. The site-specific monitoring plan must contain sufficient procedures to ensure continuing compliance with all applicable emission limits and must demonstrate, based on documented test results, the relationship between emissions of D/F and the proposed monitoring parameters for that pollutant. Test data must establish the highest level of D/F that will be emitted from each furnace. This may be determined by conducting performance tests and monitoring operating parameters while charging the furnace with feed/charge materials containing the highest anticipated levels of oils and coatings and fluxing at the highest anticipated rate. If IDEM, OAQ, determines that any revisions of the site-specific monitoring plan are necessary to meet the requirements of this section or this subpart, the Permittee must promptly make all necessary revisions and resubmit the revised plan to IDEM, OAQ. The site-specific monitoring plan shall include the following information:

- (a) Each site-specific monitoring plan shall document each work practice, equipment/design practice, pollution prevention practice, or other measure used to meet the applicable emission standards.
- (b) Each site-specific monitoring plan shall include provisions for unit labeling as required in § 63.1510(c), feed/charge weight measurement (or production weight measurement) as required in § 63.1510(e), and flux weight measurement as required in § 63.1510(j).
- (c) If a continuous emission monitoring system is included in a site-specific monitoring plan, the plan shall include provisions for the installation, operation, and maintenance of the system to provide quality-assured measurements in accordance with all applicable requirements of the general provisions in 40 CFR 63, Subpart A.
- (d) If a continuous opacity monitoring system is included in a site-specific monitoring plan, the plan shall include provisions for the installation, operation, and maintenance of the system to provide quality-assured measurements in accordance with all applicable requirements of this subpart.
- (e) If a site-specific monitoring plan includes a scrap inspection program for monitoring the scrap contaminant level of furnace feed/charge materials, the plan shall include provisions for the demonstration and implementation of the program in accordance with all applicable requirements in § 63.1510(p).
- (f) If a site-specific monitoring plan includes a calculation method for monitoring the scrap contaminant level of furnace feed/charge materials, the plan shall include provisions for the demonstration and implementation of the program in accordance with all applicable requirements in § 63.1510(q).

#### D.1.10 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and any control devices. If the OM&M and sites-specific plans required by Conditions D.1.8 and D.1.9 are developed in accordance with Section B - Preventive Maintenance Plans, then after the plans have been approved, they shall satisfy the requirements of this condition.

### **Compliance Determination Requirements**

#### D.1.11 Testing Requirements [326 IAC 2-8-5(a)(1),(4)][326 IAC 2-1.1-11]

In order to demonstrate compliance with Conditions D.1.1 and D.1.3, the Permittee shall perform PM and PM10 testing according to the following schedule:

- (a) Within ninety (90) days after issuance of this Significant Permit Revision No. 033-16754-00016 for furnaces A2, A4, A6, A7, A8, A10, A11, and A12; and within one-hundred eighty (180) days after startup for new furnace A3; and
- (b) During the period from July 2006 to November for furnaces A1, A2, A5, A9, and A13.

PM and PM10 testing shall be performed during metal melting and metal fluxing utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every two and one-half (2.5) years from the dates of the valid compliance demonstrations. PM-10 includes filterable and condensable PM-10. Testing shall be conducted in accordance with Section C - Performance Testing.

**D.1.12 Testing Requirements [326 IAC 2-8-5(a)(1),(4)][326 IAC 2-1.1-11][40 CFR 63, Subpart RRR]**

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In order to demonstrate compliance with Condition D.1.6 and Subpart RRR, the Permittee shall:

- (a) Perform D/F testing within ninety (90) days after startup of new furnace A3, and by the § 63.1501(a) compliance date (i.e., March 24, 2003) for existing furnaces A1, A2, and A4-A13, all in accordance with the requirements in 40 CFR 63, Subpart A and 40 CFR 63, Subpart RRR. The Permittee shall use Method 23 in Appendix A to 40 CFR 60 or an alternative method approved by the Commissioner to measure the concentration of D/F. Testing shall be repeated on all furnaces every two and one-half (2.5) years from the dates of the valid compliance demonstrations. Testing shall be conducted in accordance with Section C - Performance Testing.
- (b) The Permittee shall establish a minimum or maximum operating parameter value, or an operating parameter range for each parameter to be monitored as required by 40 CFR 63.1510 that ensures compliance with the applicable emission limit for D/F. The Permittee may use existing data in addition to the results of the performance test to establish operating parameter values for compliance monitoring provided the requirements of 40 CFR 63.1511(g) are met [40 CFR 63.1511(g)].

**D.1.13 Feed/Charge Determination [40 CFR Part 63.1506(d)]**

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Pursuant to 40 CFR 63.1506, the Permittee shall install and operate a device that measures and records or otherwise determine the weight of feed/charge (or throughput) for each operating cycle or time period used in the performance test. The Permittee shall operate each measurement system or other weight determination procedure in accordance with the Operation, Maintenance, and Monitoring Plan. Alternatively, the Permittee may choose to measure and record aluminum production weight from an affected emission unit rather than feed/charge weight provided that the aluminum production weight is measured for all emission units within a secondary aluminum processing unit and all calculations to demonstrate compliance with the emission limits for secondary aluminum processing units are based on aluminum production weight rather than feed/charge weight.

**D.1.14 Secondary Aluminum Smelting Compliance Determination [40 CFR Part 63, Subpart RRR]**

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Pursuant to 40 CFR Part 63.1510, the following conditions shall apply to each reverberatory furnace:

- (a) For each furnace, the Permittee shall [63.1506(m)]:
  - (1) Maintain the total reactive flux injection rate for each operating cycle or time period used in the performance test at or below the average rate established during the performance test.
  - (2) Operate each furnace in accordance with the work practice/pollution prevention measures documented in the Operation, Maintenance, and Monitoring (OM&M) plan and within the parameter values or ranges established in the OM&M plan.
- (b) Pursuant to 63.1510(j), for each furnace the Permittee shall comply as follows:
  - (1) Install, calibrate, operate, and maintain a device to continuously measure and record the weight of gaseous or reactive liquid flux injected into each furnace.

- (A) The monitoring system must record the weight for each fifteen (15) minute period, during which reactive fluxing occurs, over the same operating cycle or time period used in the performance test.
  - (B) The accuracy of the weight measurement shall be within one (1) percent of the weight of the reactive component of the flux being measured. The Permittee may apply to IDEM, OAQ, to use a weight measurement device of alternative accuracy in cases where the reactive flux flow rates are so low as to make the use of a weight measurement device of within one (1) percent accuracy impracticable.
  - (C) The Permittee shall verify the calibration of the weight measurement device in accordance with the schedule specified by the manufacturer, or if no calibration schedule is specified, at least once every six (6) months.
- (2) Calculate and record the flux injection rate (kg/Mg or lb/ton) for each operating cycle or time period used in the performance test using the procedure in 40 CFR 63.1512(o).
- (3) Record, for each fifteen (15) minute time period during each operating cycle or time period used in the performance test during which reactive fluxing occurs, the time, weight, and type of flux for each addition of reactive flux.
- (4) Calculate and record the total reactive flux injection rate for each operating cycle or time period used in the performance test.
- (c) Pursuant to 40 CFR 63.1510(s)(1), the Permittee shall include, within the OM&M plan prepared in accordance with 40 CFR 63.1510(b), the following information:
  - (1) The identification of each emission unit in the secondary aluminum processing unit (SAPU);
  - (2) The specific control technology of pollution prevention measure to be used for each emission unit in the SAPU and the date of its installation or application;
  - (3) The emission limit calculated for each SAPU and performance test result with supporting calculations demonstrating initial compliance with each applicable emission limit;
  - (4) Information and data demonstrating compliance for each emission unit with all applicable design equipment work practice or operational standards of Subpart RRR; and
  - (5) The monitoring requirements applicable to each emission unit in a SAPU and the monitoring procedures for daily calculation of the 3-day, 24-hour rolling average using the procedure in 40 CFR 63.1510(t).
- (d) The SAPU compliance procedures within the OM&M plan shall not contain any of the information provided in 40 CFR 63.1510(s)(2)(i) through (iv). [40 CFR 63.1510(s)(2)]

- (e) To revise the SAPU compliance provisions within the OM&M plan prior to the end of the permit term, the owner or operator must submit a request to the applicable permitting authority containing the information required by paragraph (s)(1) of this section and obtain approval of the applicable permitting authority prior to implementing any revisions. [40 CFR 61.1510(s)(3)]

#### **Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]**

##### **D.1.15 Visible Emissions Notations**

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- (a) Visible emission notations of the reverberatory melt furnaces' exhaust stacks (E-1 through E-13) shall be performed once per shift during normal daylight operations when metal melting and fluxing is occurring and when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

##### **D.1.16 Labeling [40 CFR Part 63.1510(c)]**

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The Permittee shall inspect the labels for each furnace at least once per calendar month to confirm that posted labels as required by the operational standard in § 63.1506(b) are intact and legible. [§ 63.1510(c)].

##### **D.1.17 Feed/Charge Determination [40 CFR Part 63.1510(e)]**

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The Permittee shall install, calibrate, operate, and maintain a device to measure and record the total weight of feed/charge to, or the aluminum production from each furnace over the same operating cycle or time period used in the performance test. Feed/charge or aluminum production within SAPUs must be measured and recorded on an emission unit-by-emission unit basis. The accuracy of the weight measurement device or procedure must be  $\pm 1$  percent of the weight being measured.

##### **D.1.18 Corrective Action [40 CFR Part 63.1506(p)]**

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When a process parameter deviates from the value or range established during the performance test and incorporated in the Operation, Maintenance, and Monitoring Plan, the Permittee shall initiate corrective action. The corrective action shall restore operation of the affected emission unit (including the process or control device) to its normal or usual mode of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. Corrective actions taken shall include follow-up actions necessary to return the process or control device parameter level(s) to the value or range of values established during the performance test and steps to prevent the likely recurrence of the cause of the deviation [§63.1506(p)].



**D.1.19 Compliance Monitoring Requirements [40 CFR Part 63.1510(t)] [40 CFR Part 63.1510(u)]**

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Pursuant to 40 CFR Subpart RRR, on and after the compliance date, the Permittee shall monitor all emission units and control equipment according to the following requirements [§ 63.1510(a)]:

- (a) The Permittee shall calculate and record the 3-day, 24- hour rolling average emissions of D/F for each furnace on a daily basis. To calculate the 3-day, 24-hour rolling average, the Permittee shall [§ 63.1510(t)]:
  - (1) Calculate and record the total weight of material charged to each furnace for each twenty-four- (24-) hour day of operation using the feed/charge weight data collected as required under Subpart RRR.
  - (2) To provide emissions for each furnace for the twenty-four- (24-) hour period, in pounds: multiply the total feed/charge weight to the furnace or the weight of aluminum produced by the furnace for the twenty-four- (24-) hour period, by the emission rate (in lb/ton of feed/charge) for that furnace (as determined during the emission test).
  - (3) Calculate and record the three- (3-) day, twenty-four- (24-) hour rolling average for each pollutant each day by summing the daily emission rates for D/F over the three (3) most recent consecutive days and dividing by three (3).
- (b) As an alternative to the procedures in (a) above, the Permittee may demonstrate through performance tests, that each individual furnace is in compliance with the applicable emission limit [40 CFR 63.1510(u)].

**Record Keeping and Reporting Requirement [326 IAC 2-8-4(3)] [326 IAC 2-8-16]**

**D.1.20 Record Keeping Requirements**

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- (a) To document compliance with Condition D.1.1, the Permittee shall maintain records in accordance with (1) and (3) below. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.
  - (1) Calendar dates covered in the compliance determination period;
  - (2) Total aluminum produced in furnaces A2, A3, A4, A6, A7, A8, and A10 - A12 for each month; and
  - (3) Total aluminum produced in furnaces A1, A5, A9, and A13 for each month.
- (b) To document compliance with Condition D.1.2, the Permittee shall maintain records in accordance with (1) and (4) below. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.
  - (1) Calendar dates covered in the compliance determination period;
  - (2) Total hexachloroethane input usage at furnaces A1 through A13 for each month;
  - (3) Total SF-350 type flux input usage at furnaces A1 through A13 for each month; and

- (4) The total weight of HCl and HF, each as a single HAP, emitted for each compliance period. This determination shall be based on complete (100%) chemical conversion of chlorine in the hexachloroethane in the flux to HCl emitted, and complete (100%) chemical conversion of fluorine in the flux to HF emitted based on 21.614 weight percent fluorine in the flux.
- (c) To document compliance with Condition D.1.15, the Permittee shall maintain records of once per shift visible emission notations of the reverberatory melt furnace exhaust stacks.
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

**D.1.21 Secondary Aluminum Production Record Keeping Requirements [40 CFR Part 63, Subpart RRR]**  
Pursuant to 40 CFR Part 63.1517, the Permittee shall:

- (a) As required by 40 CFR 63.10(b), the Permittee shall maintain files of all information (including all reports and notifications) required by the general provisions and Subpart RRR.
- (b) The Permittee shall retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records must be retained at the facility. The remaining 3 years of records may be retained off site.
- (c) The Permittee may retain records on microfilm, computer disks, magnetic tape, or microfiche; and report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.
- (d) In addition to the general records required by 40 CFR 63.1510(b), the Permittee of an affected unit, including an emission unit in a secondary aluminum processing unit (i.e., furnaces A1 through A13) must maintain records of:
  - (1) For each group 1 furnace at this source, records of 15-minute block average weights of gaseous or liquid reactive flux injection, total reactive flux injection rate and calculations (including records of the identity, composition, and weight of each addition of gaseous, liquid or solid reactive flux), including records of any period the rate exceeds the compliant operating parameter value and corrective action taken.
  - (2) For each continuous monitoring system, records required by 40 CFR 63.10(c).
  - (3) For each furnace as a unit subject to an emission standard in kg/Mg (lb/ton) of feed/charge, records of feed/charge (or throughput) weights for each operating cycle or time period used in the performance test.
  - (4) Approved site-specific monitoring plan for each furnace, as a group 1 furnace without an add-on pollution control device, with records documenting conformance with the plan.
  - (5) Records of monthly inspections for proper unit labeling for each affected source and emission unit subject to labeling requirements.

- (6) Records for any approved alternative monitoring or test procedure.
- (7) Current copy of all required plans, including any revisions, with records documenting conformance with the applicable plan, including:
  - (A) Startup, shutdown, and malfunction plan;
  - (B) For major sources, OM&M plan; and
  - (C) Site-specific secondary aluminum processing unit emission plan.
- (8) For each furnace, records of total charge weight for each 24-hour period and calculations of 3-day, 24-hour rolling average emissions.

**D.1.22 Secondary Aluminum Production Record Keeping Requirements [40 CFR Part 63, Subpart RRR]**

- (a) Pursuant to 40 CFR 63.1510 and 63.1516, the Permittee shall provide notification of the anticipated date for conducting performance tests. The Permittee shall notify IDEM, OAQ, of the intent to conduct a performance test at least 60 days before the performance test is scheduled.
- (b) Pursuant to 40 CFR 63.1515(b), the Permittee shall submit a notification of compliance status report within 60 days after the compliance date specified in 40 CFR 63.1501, except within 90 days after conducting the initial performance test required by § 63.1511(b) for new furnace A3. The notification must be signed by the responsible official who must certify its accuracy. A complete notification of compliance status report must include the information specified in paragraphs (a)(1) through (10) of this section. The required information may be submitted in an operating permit application, in an amendment to an operating permit application, in a separate submittal, or in any combination. In a State with an approved operating permit program where delegation of authority under section 112(l) of the CAA has not been requested or approved, the owner or operator must provide duplicate notification to the applicable Regional Administrator. If a Permittee submits the information specified in this section at different times or in different submittals, later submittals may refer to earlier submittals instead of duplicating and resubmitting the information previously submitted. A complete notification of compliance status report must include:
  - (1) All information required in 40 CFR 63.9(h). The Permittee shall provide a complete performance test report for each furnace for which a performance test is required. A complete performance test report includes all data, associated measurements, and calculations (including visible emission and opacity tests).
  - (2) The approved site-specific test plan and performance evaluation test results for each continuous monitoring system.
  - (3) Unit labeling as described in 40 CFR 63.1506(b), including process type or furnace classification and operating requirements.
  - (4) The compliant operating parameter value or range established for furnace with supporting documentation and a description of the procedure used to establish the value (e.g., total reactive chlorine flux injection rate), including the operating cycle or time period used in the performance test.

- (5) If applicable, design information and analysis, with supporting documentation, demonstrating conformance with the requirements for capture/collection systems in 40 CFR 63.1506(c).
  - (6) If applicable, analysis and supporting documentation demonstrating conformance with EPA guidance and specifications for bag leak detection systems in 40 CFR 63.1510(f).
  - (7) Approved OM&M plan.
  - (8) Startup, shutdown, and malfunction plan, with revisions.
- (c) The Permittee shall develop and implement a written plan that contains specific procedures to be followed for operating and maintaining the source during periods of startup, shutdown, and malfunction, and a program of corrective action for malfunctioning process and air pollution control equipment used to comply with the standard. The Permittee shall also keep records of each event as required by 40 CFR 63.10(b) and record and report if an action taken during a startup, shutdown, or malfunction is not consistent with the procedures in the plan as described in 40 CFR 63.6(e)(3). In addition to the information required in 40 CFR 63.6(e)(3), the plan must include [40 CFR 63.1516(a)]:
- (1) Procedures to determine and record the cause of the malfunction and the time the malfunction began and ended; and
  - (2) Corrective actions to be taken in the event of a malfunction of a process or control device, including procedures for recording the actions taken to correct the malfunction or minimize emissions.
- (d) The Permittee shall submit semiannual reports within 60 days after the end of each 6-month period. Each report must contain the information specified in 40 CFR 63.10(c). When no deviations of parameters have occurred, the owner or operator must submit a report stating that no excess emissions occurred during the reporting period [40 CFR 63.1516(b)].
- A report must be submitted if any of these conditions occur during a 6-month reporting period:
- (1) An excursion of a compliant process or operating parameter value or range (e.g., total reactive chlorine flux injection rate, definition of acceptable scrap, or other approved operating parameter).
  - (2) An action taken during a startup, shutdown, or malfunction was not consistent with the procedures in the plan as described in 40 CFR 63.6(e)(3).
  - (3) An affected source (including an emission unit in a secondary aluminum processing unit) was not operated according to the requirements of Subpart RRR.
  - (4) A deviation from the 3-day, 24-hour rolling average emission limit for a secondary aluminum processing unit.

- (e) The Permittee shall submit the results of any performance test conducted during the reporting period, including one complete report documenting test methods and procedures, process operation, and monitoring parameter ranges or values for each test method used for a particular type of emission point tested [40 CFR 63.1516(b)].
- (f) For the purpose of annual certifications of compliance required by 40 CFR Part 70 or 71, the Permittee shall certify continuing compliance based upon, but not limited to, the following conditions [40 CFR 63.1516(c)]:
  - (1) Any period of excess emissions, as defined in the semiannual report, that occurred during the year were reported as required by this subpart; and
  - (2) All monitoring, record keeping, and reporting requirements were met during the year.

#### **D.1.23 Reporting Requirements**

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A quarterly summary of the information to document compliance with Conditions D.1.1 and D.1.2 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the calendar quarter being reported.

## SECTION D.2

## FACILITY OPERATION CONDITIONS

Facility Descriptions [326 IAC 2-8-4(10)]: The following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6.
- (b) Trimmers that do not produce fugitive emissions and that are equipped with a dust collection trim material recovery device such as a bag filter or cyclone, including:
  - (1) two (2) sawing and trimming operations for furnaces A1 through A13, excluding A3, individually identified as C-1 and C-2, processing up to a total of 3.8 tons aluminum per hour; and
  - (2) sawing and trimming operation for furnace A3 processing up to 3.0 tons aluminum per hour,utilizing two (2) cyclones for particulate matter control each exhausting through one (1) stack respectively identified as E-14 and E-15.
- (c) Other activities and categories with PM/PM10 emissions below the insignificant thresholds of five (5) pounds per hour or twenty-five (25) pounds per day:
  - (1) Aluminum pouring and casting operations for furnaces A1 through A11, excluding A3, rated at 18.01 tons of melted aluminum per hour.
  - (2) Aluminum pouring and casting operation for furnace A3, identified as FLCA, rated at 6.0 tons of melted aluminum per hour.
  - (3) Aluminum pouring and casting operation for furnaces A12 and A13, identified as ME Cell, rated at 7.0 tons of melted aluminum per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

## Emission Limitations and Standards [326 IAC 2-8-4(1)]

### D.2.1 Particulate [326 IAC 6-3-2]

- (a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the sawing and trimming operations identified as C-1 and C-2 shall not exceed 10.0 pounds per hour when operating at a process weight rate of 3.8 tons per hour.
- (b) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the sawing and trimming operation for furnace A3 shall not exceed 8.6 pounds per hour when operating at a process weight rate of 3.0 tons per hour.

- (c) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the pouring and casting operation for furnaces A1 through A11, excluding A3, shall not exceed 28.4 pounds per hour when operating at a process weight rate of 18.01 tons per hour.
- (d) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the FLCA pouring and casting operation shall not exceed 13.6 pounds per hour when operating at a process weight rate of 6.0 tons per hour.
- (e) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the ME Cell pouring and casting operation shall not exceed 15.1 pounds per hour when operating at a process weight rate of 7.0 tons per hour.
- (f) The pounds per hour allowable particulate emission rates were calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

#### D.2.2 Volatile Organic Compounds (VOC)

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Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), the owner or operator shall:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

#### Compliance Determination Requirements

##### D.2.3 Testing Requirements [326 IAC 2-8-5(a)(1),(4)]

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The Permittee is not required to test these facilities by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the particulate limit specified in Condition D.2.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

**Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]**

There are no applicable compliance monitoring conditions for these facilities.

**Record Keeping and Reporting Requirement [326 IAC 2-8-4(3)] [326 IAC 2-8-16]**

There are no specific record keeping or reporting requirements for these facilities.



**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE BRANCH**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)  
CERTIFICATION**

Source Name: Citation Bohn Aluminum Corp.  
Source Address: 6378 U.S. Highway 6 West, Butler, IN 46721  
Mailing Address: 6378 U.S. Highway 6 West, Butler, IN 46721  
FESOP No.: F033-7938-00016

**This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.**

Please check what document is being certified:

- 9 Annual Compliance Certification Letter
- 9 Test Result (specify) \_\_\_\_\_
- 9 Report (specify) \_\_\_\_\_
- 9 Notification (specify) \_\_\_\_\_
- 9 Other (specify) \_\_\_\_\_

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE BRANCH  
P.O. Box 6015  
100 North Senate Avenue  
Indianapolis, Indiana 46206-6015  
Phone: 317-233-5674  
Fax: 317-233-5967**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)  
EMERGENCY/DEVIATION OCCURRENCE REPORT**

Source Name: Citation Bohn Aluminum Corp.  
Source Address: 6378 U.S. Highway 6 West, Butler, IN 46721  
Mailing Address: 6378 U.S. Highway 6 West, Butler, IN 46721  
FESOP No.: F033-7938-00016

**This form consists of 2 pages**

**Page 1 of 2**

Check either No. 1 or No.2

- 9 1.** This is an emergency as defined in 326 IAC 2-7-1(12)  
CThe Permittee must notify the Office of Air Quality (OAQ), within four **(4)** business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and  
CThe Permittee must submit notice in writing or by facsimile within two **(2)** days (Facsimile Number: 317-233-5967), and follow the other requirements of 326 IAC 2-7-16
- 9 2.** This is a deviation, reportable per 326 IAC 2-7-5(3)(c)  
CThe Permittee must submit notice in writing within ten **(10)** calendar days

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:

Control Equipment:

Permit Condition or Operation Limitation in Permit:

Description of the Emergency/Deviation:

Describe the cause of the Emergency/Deviation:

If any of the following are not applicable, mark N/A

Page 2 of 2

Date/Time Emergency/Deviation started:
Date/Time Emergency/Deviation was corrected:
Was the facility being properly operated at the time of the emergency/deviation?    Y    N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO <sub>2</sub> , VOC, NO <sub>x</sub> , CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency/deviation:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: \_\_\_\_\_  
Title / Position: \_\_\_\_\_  
Date: \_\_\_\_\_  
Phone: \_\_\_\_\_

## INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY COMPLIANCE DATA SECTION

### FESOP Quarterly Report

Source Name: Citation Bohn Aluminum Corp.  
Source Address: 6378 U.S. Highway 6 West, Butler, IN 46721  
Mailing Address: 6378 U.S. Highway 6 West, Butler, IN 46721  
FESOP No.: F033-7938-00016  
Facility: Reverberatory melt furnaces A1 through A13  
Parameter: Aluminum produced  
Limit: (a) total aluminum produced in reverberatory furnaces A2, A3, A4, A6, A7, A8, A10, A11, and A12 shall not exceed 30,474 tons per 12 consecutive month period with compliance determined at the end of each month  
(b) total aluminum produced in reverberatory furnaces A1, A5, A9, and A13 shall not exceed 15,942 tons per twelve (12) consecutive month period with compliance determined at the end of each month

YEAR: \_\_\_\_\_

Month	Aluminum Produced This Month (tons)		Aluminum Produced Previous 11 Months (tons)		12 Month Aluminum Produced (tons)	
	A2, A3, A4, A6, A7, A8, A10, A11, A12(total)	A1, A5, A9, A13 (total)	A2, A3, A4, A6, A7, A8, A10, A11, A12(total)	A1, A5, A9, A13 (total)	A2, A3, A4, A6, A7, A8, A10, A11, A12(total)	A1, A5, A9, A13 (total)
Month 1						
Month 2						
Month 3						

- 9 No deviation occurred in this quarter.  
9 Deviation/s occurred in this quarter.  
Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_  
Title / Position: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Date: \_\_\_\_\_  
Phone: \_\_\_\_\_

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION**

**FESOP Quarterly Report**

Source Name: Citation Bohn Aluminum Corp.  
Source Address: 6378 U.S. Highway 6 West, Butler, IN 46721  
Mailing Address: 6378 U.S. Highway 6 West, Butler, IN 46721  
FESOP No.: F033-7938-00016  
Facility: Reverberatory melt furnaces A1 through A13  
Parameter: Hexachloroethane input usage in the fluxing process; and SF-350 type flux input usage  
Limit: (a) For chlorine-based fluxing:  
The total hexachloroethane input usage at furnaces A1 through A13 shall not exceed 21,645 pounds per twelve (12) consecutive month period with compliance demonstrated at the end of each month.  
(b) For fluorine-based fluxing:  
The total SF-350 type flux input usage at furnaces A1 through A13 shall not exceed 82,425 pounds per twelve (12) consecutive month period with compliance demonstrated at the end of each month.

YEAR: \_\_\_\_\_

Month	Furnace A1-A13 Material Input Usage This Month (tons)		Furnace A1-A13 Material Input Usage Previous 11 Months (tons)		12 Month Furnace A1-A13 Material Input Usage (tons)	
	hexachloroethane	SF-350 flux	hexachloroethane	SF-350 flux	hexachloroethane	SF-350 flux
Month 1						
Month 2						
Month 3						

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.

Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE BRANCH**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)  
QUARTERLY COMPLIANCE MONITORING REPORT**

Source Name: Citation Bohn Aluminum Corp.  
Source Address: 6378 U.S. Highway 6 West, Butler, IN 46721  
Mailing Address: 6378 U.S. Highway 6 West, Butler, IN 46721  
FESOP No.: F033-7938-00016

Months: \_\_\_\_\_ to \_\_\_\_\_ Year: \_\_\_\_\_

This report is an affirmation that the source has met all the compliance monitoring requirements stated in this permit. This report shall be submitted quarterly. Any deviation from the compliance monitoring requirements and the date(s) of each deviation must be reported. Additional pages may be attached if necessary. This form can be supplemented by attaching the Emergency/Deviation Occurrence Report. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

9 NO DEVIATIONS OCCURRED THIS REPORTING PERIOD

9 THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD.

Compliance Monitoring Requirement (e.g. Permit Condition D.1.5)	Number of Deviations	Date of each Deviations

Form Completed By: \_\_\_\_\_  
Title/Position: \_\_\_\_\_  
Date: \_\_\_\_\_  
Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

## **Indiana Department of Environmental Management Office of Air Quality**

### **Technical Support Document (TSD) for a Significant Permit Revision to a Federally Enforceable State Operating Permit**

#### **Source Background and Description**

<b>Source Name:</b>	<b>Citation Bohn Aluminum Corporation</b>
<b>Source Location:</b>	<b>6378 U.S. Highway 6 West, Butler, Indiana 46721</b>
<b>County:</b>	<b>DeKalb</b>
<b>SIC Code:</b>	<b>3365,3363,3341</b>
<b>Operation Permit No.:</b>	<b>F033-7938-00016</b>
<b>Operation Permit Issuance Date:</b>	<b>January 26, 1999</b>
<b>Significant Permit Revision No.:</b>	<b>033-16754-00016</b>
<b>Permit Reviewer:</b>	<b>Michael Hirtler / EVP</b>

The Office of Air Quality (OAQ) has reviewed a revision application from Citation Bohn Aluminum Corporation relating to the operation of their secondary aluminum foundry and die casting source.

#### **History**

On January 31, 2003, Citation Bohn Aluminum Corporation submitted an application to the OAQ requesting approval for one (1) new reverberatory melt furnace at their existing source. The new furnace, identified as A3, will replace the existing A3 furnace currently operating at this source. This approval will increase the maximum melt capacity from the current A3 maximum of 1.25 tons of aluminum melted per hour to 6.0 tons of aluminum melted per hour. Citation Bohn Aluminum Corporation has requested that the current FESOP status remain unchanged for this source. Citation Bohn Aluminum Corporation was issued FESOP No. 033-7938-00016 on January 26, 1999.

#### **Explanation of Revisions Requested**

This significant permit revision consists of the following:

- (a) The following new emission units and pollution control devices during this review process:

One (1) reverberatory melt furnace identified as A3 with a maximum melt capacity of 6.0 tons of aluminum per hour, to be installed in 2003, equipped with two (2) natural gas fired burners rated at 24.0 million British thermal units (MMBtu) per hour total, exhausting through one (1) stack identified as E-3.

- (b) Upon this approval, the following facility listed at Section A.2(c) of FESOP No. 033-7938-00016, issued on January 26, 1999, will be removed from the source:

One (1) reverberatory melt furnace identified as A3 with a maximum melt capacity of 1.25 tons of aluminum per hour, equipped with two (2) natural gas fired burners rated at 7.52 MMBtu per hour total, exhausting through one (1) stack identified as E-3.

- (c) The addition of the following insignificant activities, as defined in 326 IAC 2-7-1(21):
  - (1) Aluminum pouring and casting operation for furnace A3, identified as FLCA, rated at 6.0 tons of melted aluminum per hour.
  - (2) Sawing and trimming operations for furnace A3, processing up to 3.0 tons aluminum per hour, utilizing existing cyclones C1 and C2 for particulate matter control, exhausting respectively to stacks E14 and E15.
  - (3) Thirteen (13) electric crucible holding furnaces. *(Note: these electric furnaces replace natural gas-fired crucible holding furnaces identified as HF3 - HF7a, HF7b, HF8 - HF14, listed as insignificant activities at Section A.2(c) of FESOP No. 033-7938-00016, issued on January 26, 1999.)*
- (d) IDEM, OAQ, has decided to incorporate the full requirements of 40 CFR Part 63 Subpart RRR, as applies to this source. This includes existing affected equipment and the new equipment proposed herein. This also reflects the final rule revisions promulgated by EPA on September 24, 2002 (67 Federal Register 59787, September 24, 2002) and December 30, 2002 (67 Federal Register 79808, December 30, 2002).

### Existing Approvals

The source was issued a FESOP No. 033-7938-00016 on January 6, 1999. The source has since received the following:

- (a) First Administrative Amendment No. 033-14004, issued on May 14, 2001.
- (b) First Significant Permit Revision No. 033-14732, issued on October 29, 2001.
- (c) Second Significant Permit Revision No. 033-14858, issued on January 4, 2002.
- (d) Third Significant Permit Revision No. 033-15396, issued on August 7, 2002.
- (e) Interim Significant Permit Revision No. I-033-16754, denied on March 20, 2003.

Except for the interim permit denial, the source has since been operating under these approvals.

### Enforcement Issue

The source has the following enforcement action pending:

*Notice of Violation (NOV), Case No. 2002-11359-A, signed May 28, 2002:*

Citation Bohn Aluminum exceeded an allowable emission rate, as demonstrated by stack testing conducted September 26-28, 2001. Pursuant to original FESOP No. F033-7938-00016, Condition D.1.2, all reverberatory furnaces have an allowable emission rate of 0.3343 pound hydrochloric acid (HCl) per pound of hexachloroethane used (i.e., lb HCl/lb hexachloroethane). The compliance test showed an average emission rate of 0.3650 lb HCl/lb of hexachloroethane for reverberatory furnace A5.



After issuance of this NOV, additional HCl emissions testing was conducted at reverberatory furnaces A13 and A1 on August 28-29, 2002 and November 12-15, 2002, respectively. While furnace A1 demonstrated compliance with the allowable emission rate of 0.3343 lb HCl/lb hexachloroethane, furnace A13 tested at an average HCl emission rate of 0.5769 lb/lb of hexachloroethane.

IDEM is aware of the results of this additional testing and will take the appropriate action.

### **Stack Summary**

There are no new stacks as the new equipment will utilize existing stacks.

### **Recommendation**

The staff recommends to the Commissioner that the Significant Permit Revision be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on January 31, 2003. Additional information was received on March 17, March 20, 2003, and March 31, 2003.

### **Emission Calculations**

See Appendix A of this document for detailed emissions calculations (see Appendix A, pages 1 through 6).

The hydrochloric acid (HCl) emission rates from chlorine-based flux usage reflects all chlorine in the flux to be chemically converted to, and emitted as, HCl. Since the hexachloroethane in the flux is the source of chlorine, the source has requested that HCl emissions be expressed in terms of pounds of hexachloroethane used. Therefore, based on the molecular formulae for hexachloroethane,  $C_2Cl_6$ , and hydrochloric acid, HCl, with respective molecular weights at 236.72 and 36.46 lb/lb-mole, the furnace emission rate is 0.924 lb HCl/lb hexachloroethane used (i.e.,  $6 \times 36.46 / 236.72$ ).

Likewise, the hydrogen fluoride (HF) emission rates from fluorine-based flux usage reflects all fluorine in the flux to be chemically converted to, and emitted as, HF. The fluorine-based flux contains a maximum of 21.614 weight percent fluorine in the flux. Based on the respective molecular weights for fluorine (F) and hydrogen fluoride (HF) at 18.998 and 20.006 lb/lb-mole, the furnace emission rate is 0.2276 lb HF/lb SF350 type flux used.

### **Potential To Emit for the Revision**

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA."

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	159.8
PM-10	115.7
SO <sub>2</sub>	0.6
VOC	4.7
CO	8.8
NO <sub>x</sub>	10.8

Note: For the purpose of determining Title V applicability for particulates, PM-10, not PM, is the regulated pollutant in consideration.

HAP's	Potential To Emit (tons/year)
hydrochloric acid (HCl)	10.4
hydrogen fluoride (HF)	22.6
misc. HAP metals from smelting	2.7
dioxans/furans (D/F)	0.0
misc. HAPs from combustion	0.2
TOTAL	25.6*

\* Emissions from HCl and HF are mutually exclusive, as each results from separate metal fluxes. The worst-case flux and pollutant (HF) is assumed for full year total potential to emit HAPs.

### Justification for Revision

The FESOP is being revised through a FESOP Significant Permit Revision based on the following:

- (a) This revision is being performed pursuant to 326 IAC 2-8-11.1(f)(1) since the potential to emit PM and PM10 from this revision are both equal to or greater than 25 tons per year.
- (b) This revision is being performed pursuant to 326 IAC 2-8-11.1(f)(1)(B) since the modification results in the source needing to obtain a Part 70 permit under 326 IAC 2-7, pursuant to 40 CFR 63.1500(e).
- (c) This revision is being performed pursuant to 326 IAC 2-8-11.1(g) since the modification:
  - (1) triggers new applicable requirements for the units or processes under the cap;
  - (2) requires an adjustment to the existing emissions cap limitation; and
  - (3) changes existing requirements for the units or process under the cap.

### Existing Source Status

Existing Source PSD Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	<100
PM10	<100
SO <sub>2</sub>	1.0
VOC	10.0
CO	61.9
NO <sub>x</sub>	74.0
single HAP	<10
total HAPs	<25

- (a) This existing source is not a major stationary source because even though it is one of the 28 listed source categories, it does not emit 100 tons per year or greater of any regulated pollutant.
- (b) These emissions are based upon the Technical Support Documents to Significant Permit Revision No. 033-15396, issued on August 7, 2002.

### Potential to Emit for the Source After the Revision

The source, issued a FESOP on January 26, 1999, has opted to remain a FESOP source, rather than apply for a Part 70 Operating Permit. The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any control equipment is considered enforceable only after issuance of this Federally Enforceable State Operating Permit and only to the extent that the effect of the control equipment is made practically enforceable in the permit. The source's potential to emit includes the emission units included in the original FESOP (F003-5405-03112; issued on December 13, 1996) and subsequent approvals.

	Potential to Emit After Issuance <sup>(1)</sup> (tons/year)						
Process/emission unit	PM	PM-10	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs
total smelting at furnaces A1-A13 (includes new furnace A3)	89.4 <sup>(2)</sup>	<del>85.2</del> <b>60.3<sup>(2)</sup></b>	0.0	0.9	0.0	0.0	<del>9.4 (single)</del> <b>&lt;10 (single)</b> <b>&lt;12 (total)</b>
miscellaneous insignificant <sup>(3)</sup> activities	9.2	9.2	0.5	3.4	0.0	0.2	0.0
total source natural gas combustion as insignificant activity	1.3	5.2	0.9	3.7	57.1	68.0	1.2 (single) 1.3 (total)
Total PTE for Source After Issuance	<100	<100	1.4	8.0	57.1	68.2	<del>10.2 (total)</del> <b>&lt;10 (single)</b> <b>&lt;25 (total)</b>
PSD and Part 70 Threshold Levels	100	100	100	100	100	100	10 (single) 25 (total)
1. Strikeout values reflect emission limits from Significant Permit Revision No. 033-15396, issued August 7, 2002, with bold values reflecting the limits as revised herein. 2. Based on Condition D.1.1 of the Part 70 permit revised herein. 3. Includes metal pouring/casting and sawing/trimming of metal castings. 4. Applies to Part 70 only, as there are no PSD threshold levels for single and total HAPs.							

- (a) This modification to an existing minor stationary source is not major because the emission increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.
- (b) The potential to emit at this existing FESOP source, including existing and new emission units, will continue to be less than the applicable Part 70 threshold levels after this revision. Therefore, this source will still maintain its FESOP status.

### County Attainment Status

The source is located in DeKalb County.

Pollutant	Status
PM-10	attainment
SO <sub>2</sub>	attainment
NO <sub>2</sub>	attainment
Ozone	attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. DeKalb County has been designated as attainment or unclassifiable for ozone.

Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

- (b) DeKalb County has been classified as attainment or unclassifiable for all remaining criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (c) Fugitive Emissions  
Since this type of operation is one of the 28 listed source categories under 326 IAC 2-2, the fugitive particulate matter emissions are counted toward determination of PSD applicability.

### **Federal Rule Applicability**

- (a) The proposed modification is not subject to the requirements of 40 CFR 60, Subpart S, "Standards of Performance for Primary Aluminum Reduction Plants", because the source does not perform primary aluminum reduction as defined in 40 CFR 60.191.

There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) applicable to this revision.

- (b) This source is subject to the National Emission Standards for Hazardous Air Pollutants, for Secondary Aluminum Production, 40 CFR 63.1500 (Subpart RRR), and 326 IAC 20-1-1. Pursuant to Subpart RRR, proposed new reverberatory furnace A3 is considered as a Group 1 furnace and shall comply with the requirements of Subpart RRR upon startup. This new furnace, plus the existing twelve (12) natural gas-fired reverberatory furnaces identified as A1, A2, and A4 through A13 (existing A3 will be removed upon approval of this permit), comprise the secondary aluminum production operations at this source. This does not include the miscellaneous electric and natural gas fired holding furnaces at this source, as insignificant activities, since they are used only to transfer molten aluminum from reverberatory furnace to casting, and do not meet the definition of a Group 1 furnace nor melting/holding furnace. For purposes of completeness, this approval also incorporates the requirements of Subpart RRR applicable to the 12 existing reverberatory furnaces. Pursuant to 40 CFR Subpart RRR, compliance with the requirements for the existing furnaces is March 24, 2003.

Pursuant to 40 CFR 63.1500(f), *Applicability*, and FESOP No. 033-7938-00016, issued on January 6, 1999, and subsequent approvals, this secondary aluminum foundry and die casting plant is considered as an area source because it has the potential to emit less than 10 tons per year of any single HAP and less than 25 tons per year of any combination of HAPs. Therefore, pursuant to 40 CFR 63, Subpart RRR, and 326 IAC 20-1-1, the secondary aluminum production operations for area sources are subject to the following conditions:

#### Emission Limit

Effective March 23, 2004 for reverberatory furnaces A1, A2, and A4 through A13, and upon startup for reverberatory furnace A3, and pursuant to 40 CFR 63.1505(k)(3) and (5), the Permittee shall comply with the following emission limitations:

The Permittee shall not discharge or allow to be discharged to the atmosphere any 3-day, 24-hour rolling average emissions of total tetra-, penta-, hexa-, and octachlorinated dibenzo dioxins and furans (D/F) in excess of:

$$L_{cDF} = \frac{\sum_{i=l}^n (L_{iDF} \times T_{ii})}{\sum_{i=l}^n T_{ii}}$$

where  $L_{iDF}$  = The D/F emission limit for individual emission unit in the secondary aluminum processing unit; and

$L_{cDF}$  = The D/F emission limit for secondary aluminum processing unit.

The D/F emission limit ( $L_{cDF}$ ) for a Group 1 furnace without an in-line fluxer (reverberatory furnaces A1 through A13) at a secondary aluminum production facility shall be 15 Fg of D/F TEQ per Mg ( $2.1 \times 10^{-4}$  gr of D/F TEQ per ton) per ton of feed/charge or per ton of aluminum produced. Where TEQ is the toxicity equivalents for dioxins and furans as defined in "Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxins and -Dibenzofurans (CDDs and CDFs) and 1989 Update". [40 CFR 63.1503][40 CFR 63.1505(i)][40 CFR 63.1505(k)]

#### Operating Requirements

- (a) Pursuant to 40 CFR Part 63.1506(b), the Permittee shall provide and maintain easily visible labels that shall be posted at the each furnace. Said labels shall identify the applicable emission limits and means of compliance, including:
  - (1) The type of affected source or emission unit (e.g., group 1 furnace, group 2 furnace, in-line fluxer); and
  - (2) The applicable operational standard(s) and control method(s) (work practice or control device). This includes, but is not limited to, the type of charge to be used for a furnace (e.g., clean scrap only, all scrap, etc.), flux materials and addition practices, and the applicable operating parameter ranges and requirements as incorporated in the OM&M plan.
- (b) Pursuant to 40 CFR 63.1506(d), the Permittee shall install and operate a device that measures and records or otherwise determines the weight of feed/charge (or throughput) for each operating cycle or time period used in the performance test. The Permittee shall operate each measurement system or other weight determination procedure in accordance with the Operation, Maintenance, and Monitoring Plan. Alternatively, the Permittee may choose to measure and record aluminum production weight from each furnace rather than feed/charge weight provided that the aluminum production weight is measured for all furnaces within a secondary aluminum processing unit and all calculations to demonstrate compliance with the emission limits for a secondary aluminum processing unit are based on aluminum production weight rather than feed/charge weight.

- (c) For each affected unit, the Permittee shall comply with the following requirements [§ 63.1506(m)]:
  - (1) Maintain the total reactive flux injection rate for each operating cycle or time period used in the performance test at or below the average rate established during the performance test.
  - (2) Operate each furnace in accordance with the work practice/pollution prevention measures documented in the Operation, Maintenance, and Monitoring (OM&M) plan and within the parameter values or ranges established in the OM&M plan.
- (d) When a process parameter deviates from the value or range established during the performance test and incorporated in the Operation, Maintenance, and Monitoring Plan, the Permittee shall initiate corrective action. The corrective action shall restore operation of the affected emission unit (including the process or control device) to its normal or usual mode of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. Corrective actions taken shall include follow-up actions necessary to return the process or control device parameter level(s) to the value or range of values established during the performance test and steps to prevent the likely recurrence of the cause of the deviation [§ 63.1506(p)].

#### Monitoring Requirements

- (a) Pursuant to 40 CFR Subpart RRR, on and after the compliance date, the Permittee shall monitor all emission units and control equipment according to the following requirements [§ 63.1510(a)]:

The Permittee shall calculate and record the 3-day, 24- hour rolling average emissions of D/F for each furnace on a daily basis. To calculate the 3-day, 24- hour rolling average, the Permittee shall [§ 63.1510(t)]:

  - (1) Calculate and record the total weight of material charged to each furnace for each twenty-four- (24-) hour day of operation using the feed/charge weight data collected as required under Subpart RRR.
  - (2) To provide emissions for each furnace for the twenty-four- (24-) hour period, in pounds: multiply the total feed/charge weight to the furnace or the weight of aluminum produced by the furnace for the twenty-four- (24-) hour period, by the emission rate (in lb/ton of feed/charge) for that furnace (as determined during the emission test).
  - (3) Calculate and record the three- (3-) day, twenty-four- (24-) hour rolling average for each pollutant each day by summing the daily emission rates for D/F over the three (3) most recent consecutive days and dividing by three (3).
- (b) The Permittee shall prepare and implement a written Operation, Maintenance, and Monitoring (OM&M) plan for each furnace and shall submit the plan to IDEM,



OAQ, for review and approval. The OM&M plan shall be submitted by the compliance date established at § 63.1501(a) for the existing furnaces, and within ninety (90) days of the successful initial performance test for new furnace A3. Any subsequent changes to the plan shall be submitted to IDEM, OAQ, for review and approval. Pending approval of the initial or amended plan, the Permittee shall comply with the conditions of the submitted plan. The plan shall include the following information [§ 63.1510(b)]:

- (1) Process and control device parameters to be monitored to determine compliance, along with established operating levels or ranges, as applicable, for each process and control device.
- (2) A monitoring schedule for each affected source and emission unit.
- (3) Procedures for the proper operation and maintenance of each process unit and add-on control device used to meet the applicable emission limits or standards in § 63.1505.
- (4) Procedures for the proper operation and maintenance of monitoring devices or systems used to determine compliance, including:
  - (A) Calibration and certification of accuracy of each monitoring device, at least once every 6 months, according to the manufacturer's instructions; and
  - (B) Procedures for the quality control and quality assurance of continuous emission or opacity monitoring systems as required by the general provisions in subpart A of this part.
- (5) Procedures for monitoring process and control device parameters, including procedures for annual inspections of afterburners, and if applicable, the procedure to be used for determining charge/feed (or throughput) weight if a measurement device is not used.
- (6) Corrective actions to be taken when process or operating parameters or add-on control device parameters deviate from the value or range established in paragraph (b)(1) of this section, including:
  - (A) Procedures to determine and record the cause of an deviation or excursion, and the time the deviation or excursion began and ended; and
  - (B) Procedures for recording the corrective action taken, the time corrective action was initiated, and the time/date corrective action was completed.
- (7) A maintenance schedule for each process and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

- (8) Documentation of the work practice and pollution prevention measures used to achieve compliance with the applicable emission limits and a site-specific monitoring plan as required in § 63.1510(o) for each group 1 furnace not equipped with an add-on air pollution control device (i.e., furnaces A1 through A13).
- (c) The Permittee shall inspect the labels for each furnace at least once per calendar month to confirm that posted labels as required by the operational standard in § 63.1506(b) are intact and legible. [§ 63.1510(c)].
- (d) The Permittee shall install, calibrate, operate, and maintain a device to measure and record the total weight of feed/charge to, or the aluminum production from each furnace over the same operating cycle or time period used in the performance test. Feed/charge or aluminum production within SAPUs must be measured and recorded on an emission unit-by-emission unit basis. The accuracy of the weight measurement device or procedure must be  $\pm 1$  percent of the weight being measured. The Permittee shall verify the calibration of the weight measurement device in accordance with the schedule specified by the manufacturer, or if no calibration schedule is specified, at least once every six (6) months [§ 63.1510(e)].
- (e) Pursuant to 63.1510(j), for each furnace the Permittee shall comply as follows:
  - (1) Install, calibrate, operate, and maintain a device to continuously measure and record the weight of gaseous or reactive liquid flux injected into each furnace.
    - (A) The monitoring system must record the weight for each fifteen (15) minute period, during which reactive fluxing occurs, over the same operating cycle or time period used in the performance test.
    - (B) The accuracy of the weight measurement shall be within one (1) percent of the weight of the reactive component of the flux being measured. The Permittee may apply to IDEM, OAQ, to use a weight measurement device of alternative accuracy in cases where the reactive flux flow rates are so low as to make the use of a weight measurement device of within one (1) percent accuracy impracticable.
    - (C) The Permittee shall verify the calibration of the weight measurement device in accordance with the schedule specified by the manufacturer, or if no calibration schedule is specified, at least once every six (6) months.
  - (2) Calculate and record the flux injection rate (kg/Mg or lb/ton) for each operating cycle or time period used in the performance test using the procedure in 40 CFR 63.1512(o).

- (3) Record, for each fifteen (15) minute time period during each operating cycle or time period used in the performance test during which reactive fluxing occurs, the time, weight, and type of flux for each addition of reactive flux.
  - (4) Calculate and record the total reactive flux injection rate for each operating cycle or time period used in the performance test.
- (f) The Permittee shall develop, in consultation with IDEM, OAQ, a written site-specific monitoring plan for each furnace not equipped with an add-on air pollution control device (i.e., reverberatory furnaces A1 through A13). The site-specific monitoring plan shall be submitted to IDEM, OAQ, as part of the OM&M plan. The site-specific monitoring plan must contain sufficient procedures to ensure continuing compliance with all applicable emission limits and must demonstrate, based on documented test results, the relationship between emissions of D/F and the proposed monitoring parameters for that pollutant. Test data must establish the highest level of D/F that will be emitted from each furnace. This may be determined by conducting performance tests and monitoring operating parameters while charging the furnace with feed/charge materials containing the highest anticipated levels of oils and coatings and fluxing at the highest anticipated rate. If IDEM, OAQ, determines that any revisions of the site-specific monitoring plan are necessary to meet the requirements of this section or this subpart, the Permittee must promptly make all necessary revisions and resubmit the revised plan to IDEM, OAQ. The site-specific monitoring plan shall include the following information [§ 63.1510(o)]:
  - (1) Each site-specific monitoring plan shall document each work practice, equipment/design practice, pollution prevention practice, or other measure used to meet the applicable emission standards.
  - (2) Each site-specific monitoring plan shall include provisions for unit labeling as required in § 63.1510(c), feed/charge weight measurement (or production weight measurement) as required in § 63.1510(e), and flux weight measurement as required in § 63.1510(j).
  - (3) If a continuous emission monitoring system is included in a site-specific monitoring plan, the plan shall include provisions for the installation, operation, and maintenance of the system to provide quality-assured measurements in accordance with all applicable requirements of the general provisions in 40 CFR 63, Subpart A.
  - (4) If a continuous opacity monitoring system is included in a site-specific monitoring plan, the plan shall include provisions for the installation, operation, and maintenance of the system to provide quality-assured measurements in accordance with all applicable requirements of this subpart.

- (5) If a site-specific monitoring plan includes a scrap inspection program for monitoring the scrap contaminant level of furnace feed/charge materials, the plan shall include provisions for the demonstration and implementation of the program in accordance with all applicable requirements in § 63.1510(p).
- (6) If a site-specific monitoring plan includes a calculation method for monitoring the scrap contaminant level of furnace feed/charge materials, the plan shall include provisions for the demonstration and implementation of the program in accordance with all applicable requirements in § 63.1510(q).
- (g) Pursuant to 40 CFR 63.1510(s)(1), the Permittee shall include, within the OM&M plan prepared in accordance with 40 CFR 63.1510(b), the following information:
  - (1) The identification of each emission unit in the secondary aluminum processing unit (SAPU);
  - (2) The specific control technology of pollution prevention measure to be used for each emission unit in the SAPU and the date of its installation or application;
  - (3) The emission limit calculated for each SAPU and performance test result with supporting calculations demonstrating initial compliance with each applicable emission limit;
  - (4) Information and data demonstrating compliance for each emission unit with all applicable design equipment work practice or operational standards of Subpart RRR; and
  - (5) The monitoring requirements applicable to each emission unit in a SAPU and the monitoring procedures for daily calculation of the 3-day, 24-hour rolling average using the procedure in 40 CFR 63.1510(t).
- (h) The SAPU compliance procedures within the OM&M plan shall not contain any of the information provided in 40 CFR 63.1510(s)(2)(i) through (iv). [40 CFR 63.1510(s)(2)]
- (i) To revise the SAPU compliance provisions within the OM&M plan prior to the end of the permit term, the owner or operator must submit a request to the applicable permitting authority containing the information required by paragraph (s)(1) of this section and obtain approval of the applicable permitting authority prior to implementing any revisions. [40 CFR 61.1510(s)(3)]

### Performance Tests

- (a) Prior to conducting the performance test required by 40 CFR 63, Subpart RRR, the Permittee shall prepare and submit a site-specific test plan in compliance with 40 CFR 63.7(c). Following approval of the site-specific test plan, the Permittee shall demonstrate initial compliance with each applicable emission, equipment, work practice, or operational standard for each affected unit and report the results in the notification of compliance report. The Permittee shall conduct performance tests in accordance with the requirements in 40 CFR 63, Subpart A and 40 CFR 63, Subpart RRR. The Permittee shall use Method 23 in Appendix A to 40 CFR 60 or an alternative method approved by the Administrator to measure the concentration of D/F.

The Permittee shall notify the Administrator of the intent to conduct a performance test at least 60 days before the performance test is scheduled; notification of opacity or visible emission observations for a performance test shall be provided at least 30 days before the observations are scheduled to take place [§ 63.1511(a)].

- (b) The Permittee shall establish a minimum or maximum operating parameter value, or an operating parameter range for each parameter to be monitored as required by 40 CFR 63.1510 that ensures compliance with the applicable emission limit for D/F. The Permittee may use existing data in addition to the results of the performance test to establish operating parameter values for compliance monitoring provided the requirements of 40 CFR 63.1511(g) are met [40 CFR 63.1511(g)].

### Notifications

- (a) Pursuant to 40 CFR 63.1510 and 63.1516, the Permittee shall provide notification of the anticipated date for conducting performance tests. The Permittee shall notify IDEM, OAQ, of the intent to conduct a performance test at least 60 days before the performance test is scheduled.
- (b) Pursuant to 40 CFR 63.1515(b), the Permittee shall submit a notification of compliance status report within 60 days after the compliance date specified in 40 CFR 63.1501, except within 90 days after conducting the initial performance test required by § 63.1511(b) for new furnace A3. The notification must be signed by the responsible official who must certify its accuracy. A complete notification of compliance status report must include the information specified in paragraphs (a)(1) through (10) of this section. The required information may be submitted in an operating permit application, in an amendment to an operating permit application, in a separate submittal, or in any combination. In a State with an approved operating permit program where delegation of authority under section 112(l) of the CAA has not been requested or approved, the owner or operator must provide duplicate notification to the applicable Regional Administrator. If a Permittee submits the information specified in this section at different times or in different submittals, later submittals may refer to earlier submittals instead of duplicating and resubmitting the information previously submitted. A complete notification of compliance status report must include:

- (1) All information required in 40 CFR 63.9(h). The Permittee shall provide a complete performance test report for each furnace for which a performance test is required. A complete performance test report includes all data, associated measurements, and calculations (including visible emission and opacity tests).
- (2) The approved site-specific test plan and performance evaluation test results for each continuous monitoring system.
- (3) Unit labeling as described in 40 CFR 63.1506(b), including process type or furnace classification and operating requirements.
- (4) The compliant operating parameter value or range established for furnace with supporting documentation and a description of the procedure used to establish the value (e.g., total reactive chlorine flux injection rate), including the operating cycle or time period used in the performance test.
- (5) If applicable, design information and analysis, with supporting documentation, demonstrating conformance with the requirements for capture/collection systems in 40 CFR 63.1506(c).
- (6) If applicable, analysis and supporting documentation demonstrating conformance with EPA guidance and specifications for bag leak detection systems in 40 CFR 63.1510(f).
- (7) Approved OM&M plan.
- (8) Startup, shutdown, and malfunction plan, with revisions.

#### Reports

- (a) The Permittee shall develop and implement a written plan that contains specific procedures to be followed for operating and maintaining the source during periods of startup, shutdown, and malfunction, and a program of corrective action for malfunctioning process and air pollution control equipment used to comply with the standard. The Permittee shall also keep records of each event as required by 40 CFR 63.10(b) and record and report if an action taken during a startup, shutdown, or malfunction is not consistent with the procedures in the plan as described in 40 CFR 63.6(e)(3). In addition to the information required in 40 CFR 63.6(e)(3), the plan must include [40 CFR 63.1516(a)]:
  - (1) Procedures to determine and record the cause of the malfunction and the time the malfunction began and ended; and
  - (2) Corrective actions to be taken in the event of a malfunction of a process or control device, including procedures for recording the actions taken to correct the malfunction or minimize emissions.

- (b) The Permittee shall submit semiannual reports within 60 days after the end of each 6-month period. Each report must contain the information specified in 40 CFR 63.10(c). When no deviations of parameters have occurred, the owner or operator must submit a report stating that no excess emissions occurred during the reporting period [40 CFR 63.1516(b)].

A report must be submitted if any of these conditions occur during a 6-month reporting period:

- (1) An excursion of a compliant process or operating parameter value or range (e.g., total reactive chlorine flux injection rate, definition of acceptable scrap, or other approved operating parameter).
  - (2) An action taken during a startup, shutdown, or malfunction was not consistent with the procedures in the plan as described in 40 CFR 63.6(e)(3).
  - (3) An affected source (including an emission unit in a secondary aluminum processing unit) was not operated according to the requirements of Subpart RRR.
  - (4) A deviation from the 3-day, 24-hour rolling average emission limit for a secondary aluminum processing unit.
- (c) The Permittee shall submit the results of any performance test conducted during the reporting period, including one complete report documenting test methods and procedures, process operation, and monitoring parameter ranges or values for each test method used for a particular type of emission point tested [40 CFR 63.1516(b)].
- (d) For the purpose of annual certifications of compliance required by 40 CFR part 70 or 71, the Permittee shall certify continuing compliance based upon, but not limited to, the following conditions [40 CFR 63.1516(c)]:
- (1) Any period of excess emissions, as defined in the semiannual report, that occurred during the year were reported as required by this subpart; and
  - (2) All monitoring, record keeping, and reporting requirements were met during the year.

#### Records

Pursuant to 40 CFR Part 63.1517 the Permittee shall:

- (a) As required by 40 CFR 63.10(b), the Permittee shall maintain files of all information (including all reports and notifications) required by the general provisions and Subpart RRR.

- (b) The Permittee shall retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records must be retained at the facility. The remaining 3 years of records may be retained off site.
- (c) The Permittee may retain records on microfilm, computer disks, magnetic tape, or microfiche; and report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.
- (d) In addition to the general records required by 40 CFR 63.1510(b), the Permittee of an affected unit, including an emission unit in a secondary aluminum processing unit (i.e., furnaces A1 through A13) must maintain records of:
  - (1) For each group 1 furnace at this source, records of 15-minute block average weights of gaseous or liquid reactive flux injection, total reactive flux injection rate and calculations (including records of the identity, composition, and weight of each addition of gaseous, liquid or solid reactive flux), including records of any period the rate exceeds the compliant operating parameter value and corrective action taken.
  - (2) For each continuous monitoring system, records required by 40 CFR 63.10(c).
  - (3) For each furnace as a unit subject to an emission standard in kg/Mg (lb/ton) of feed/charge, records of feed/charge (or throughput) weights for each operating cycle or time period used in the performance test.
  - (4) Approved site-specific monitoring plan for each furnace, as a group 1 furnace without an add-on pollution control device, with records documenting conformance with the plan.
  - (5) Records of monthly inspections for proper unit labeling for each affected source and emission unit subject to labeling requirements.
  - (6) Records for any approved alternative monitoring or test procedure.
  - (7) Current copy of all required plans, including any revisions, with records documenting conformance with the applicable plan, including:
    - (A) Startup, shutdown, and malfunction plan;
    - (B) For major sources, OM&M plan; and
    - (C) Site-specific secondary aluminum processing unit emission plan.
  - (8) For each furnace, records of total charge weight for each 24-hour period and calculations of 3-day, 24-hour rolling average emissions.



- (c) The requirements of Section 112(j) of the Clean Air Act (40 CFR Part 63.50 through 63.56) are not applicable to this source because the source does not include one or more units that belong to one or more source categories affected by the Section 112(j) MACT Hammer date of May 15, 2002 and this source does not have the potential to emit ten (10) tons per year of a single HAP or twenty-five (25) tons per year of any combination of HAPs.
- (d) The requirements of 40 CFR Part 64, Compliance Assurance Monitoring, are not applicable to this source. Such requirements apply to a pollutant-specific emissions unit (PSEU), as defined in 40 CFR 64.1, at a major source that is required to obtain a Part 70 or 71 permit if the PSEU meets the following criteria:
  - (1) the unit is subject to an emission limitation or standard for an applicable regulated air pollutant,
  - (2) the unit uses a control device as defined in 40 CFR 64.1 to comply with that emission limitation or standard, and
  - (3) the unit has a potential to emit (PTE) before controls equal to or greater than 100 percent of the amount (tons per year) of the pollutant required for a source to classified as a Part 70 major source.

This source is presently a FESOP source and is not a major Part 70 source. However, as an area source for HAP emissions subject to Subpart RRR, the source is required to obtain a Part 70 permit pursuant to 40 CFR 63.1500(e).

The proposed PSEU (i.e., reverberatory furnace A3) has an uncontrolled PTE at greater than 100 percent of the applicable major Part 70 thresholds. However, this unit does not use a control device to comply with applicable requirements. Further, and pursuant to 40 CFR 64.2(b)(i) and (vi), *Exemptions*, the requirements of Part 64 do not apply to sources subject to Section 112 emission limits or standards published after November 15, 1990 (i.e., Subpart RRR), nor to sources using a continuous compliance determination method as defined at 40 CFR 64.1 (i.e., continuous records of material usage and production). Based on these applicable exemptions and the fact that the source does not use control devices, the requirements of 40 CFR 64, Compliance Assurance Monitoring, are not applicable to this proposed PSEU and this source.

### **State Rule Applicability**

#### **326 IAC 2-4.1-1 (New Source Toxics Control)**

Pursuant to 326 IAC 2-4.1-1 (New Source Toxics Control), any new process or production unit, which in and of itself emits or has the PTE 10 tons per year of any HAP or 25 tons per year of the combination of HAPs, and is constructed or reconstructed after July 27, 1997, must be controlled using technologies consistent with Maximum Achievable Control Technology (MACT). This permit revision will not emit any single HAP at 10 tons per twelve (12) month period or combined HAPs at 25 tons per twelve (12) month period. Further, the source is specifically regulated by a standard issued pursuant to 112(d) of the Clean Air Act, (40 CFR 63, Subpart RRR). Therefore, the requirements of 326 IAC 2-4.1-1 do not apply to this revision.

326 IAC 2-2 (Prevention of Significant Deterioration, PSD)

This modification to an existing minor stationary source, which was initially constructed prior to the August 7, 1977 rule applicability date, is not major because the source, which is one of the 28 listed source categories, does not have the potential to emit of 100 tons per year or more of any criteria pollutant after controls and enforceable limitations. The source will continue to be both a FESOP and minor stationary source after the modification and no attainment regulated pollutant shall be emitted at a rate of 100 tons per year or more. Therefore, the PSD requirements will continue to not apply.

326 IAC 2-8-4 (FESOP)

Pursuant to this rule, and after approval of this significant permit revision, the amount of PM<sub>10</sub> shall continue to be limited to less than one hundred (100) tons per year, and single and combined HAPs shall continue to be limited to less than 10 and 25 tons per year, respectively. The source shall comply with the respective PM<sub>10</sub> and HAP requirements of Conditions D.1.1 and D.1.2, revised as shown in *Proposed Changes to the Federally Enforceable State Operating Permit* located at the end of this document.

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

(a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the facilities listed below shall be limited as stated:

- (1) Furnace A3 shall not exceed 13.62 pounds per hour when operating at a process weight rate of 6.0 tons per hour.
- (2) FLCA pouring and casting operation shall not exceed 13.62 pounds per hour when operating at a process weight rate of 6.0 tons per hour.
- (3) Sawing and trimming operation for furnace A3 shall not exceed 8.56 pounds per hour when operating at a process weight rate of 3.0 tons per hour.

The pounds per hour limitations were calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

Based on the calculations made, these facilities are in compliance with this requirement (see page 6 of 6, TSD Appendix A). Pursuant to Condition D.1.11, the source shall be required to test compliance initially and at least once every 5-years to demonstrate continued compliance with the applicable limit for furnace A3. There will be no compliance monitoring condition inserted into the permit for FLCA pouring and sawing since these insignificant activities have no control device and do not have actual emissions exceeding 25 tons per year.

- (b) The allowable particulate emission rate in Significant Permit Revision No. 033-15396, issued August 7, 2002, for the existing furnace A1 through A11 casting operation, as an insignificant activity, is revised to reflect the removal of existing furnace A3 at a process weight of 1.25 tons per hour. Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the pouring and casting operation for furnaces A1 through A11, excluding A3, shall not exceed 28.44 pounds per hour when operating at a process weight rate of 18.01 tons per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

Based on the calculations made, this facility is in compliance with this requirement (see page 6 of 6, TSD Appendix A). There will be no compliance monitoring condition inserted into the permit since this facility, as an insignificant activity, has no control device and does not have actual emissions exceeding 25 tons per year.

There are no other new state rules applicable to the source during this significant revision review process.

## Testing Requirements

As noted earlier in this document, Citation Bohn Aluminum has conducted PM, PM10, and HCl stack testing on September 26-28, 2001 for reverberatory furnaces A5 and A9; August 28-29, 2002 for reverberatory furnace A13; and November 12-15, 2002 for reverberatory furnace A1. As part of this approval, the source has requested that HAP emissions from flux usage assume 100% conversion of chlorine (in the chlorinated flux) and fluorine (in the fluorinated flux) to HCl and HF, respectively. Based on this complete conversion, no testing of HCl or HF emissions during the metal fluxing process is required as part of this approval. It is noted that a material conversion of less than 100% shall not be allowed unless validated testing is first conducted and approved by IDEM, OAQ, such that the appropriate material conversion is determined. For those furnaces that have already tested and have been validated for HCl emissions, the source may submit a request for approval to use the results of OAQ validated HCl testing; however, for this approval, the full material conversion is assumed for purposes of establishing material usage limits.

For particulate matter (PM), the source will be required to demonstrate compliance with the allowable emissions of 326 IAC 6-3-2 for those furnaces that have not yet demonstrated such, inclusive of new furnace A3. The allowable limits are established at Condition D.1.3 of the permit. The calculation of uncontrolled potential to emit, based on 4.3 pounds of PM emitted per ton of metal produced (lb/ton) from U.S. EPA's AP-42 emission factor document, exceeds the allowable emission rate of 326 IAC 6-3-2 for each furnace, except furnace A8. Also, testing performed to date does not demonstrate a direct relationship between furnace capacity and resultant tested emission rate. Consequently, IDEM, OAQ, has decided that the source shall perform compliance testing on each of new furnace A3, and existing furnaces A2, A4, A6, A7, A8, A10, A11, and A12. Due to the lack of correlation between furnace capacity and tested emission rate, the source shall also test for PM10 at each of the test furnaces to demonstrated compliance with the FESOP limit

established at Condition D.1.1. Testing already conducted for existing furnaces A1, A5, A9, and A13 has demonstrated compliance with the applicable PM and PM10 emission rate limits.

The proposed new furnace A3 (and the source) is subject to the requirements of 40 CFR Part 63, Subpart RRR (*National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production*). Pursuant to 40 CFR 63.1511(b), as an area source, the Permittee shall comply with the initial performance test requirements for furnace A3 pertaining to dioxins/furans (D/F) within ninety (90) days after startup.

## **Compliance Requirements**

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-8-4. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

All compliance requirements from previous approvals were incorporated into this FESOP revision. The new compliance monitoring requirements already delineated herein under the Subpart RRR applicability section will also be incorporated into this significant FESOP revision.

### Proposed Changes to the Federally Enforceable State Operating Permit

The following changes are made as the Fourth Significant Permit Revision to FESOP No. 033-7938-00016 (new language is shown in **bold** and deleted language is shown with a ~~line through it~~):

1. Section A.1 (General Information) is revised to reflect the Responsible Official as the title, General Manager, which has been requested by the Permittee. The name of the General Manager is not included. IDEM, OAQ, has decided not to specify the name of the individual to minimize the potential for future permit revisions due to personnel changes.

#### A.1 General Information [326 IAC 2-8-3(b)]

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The Permittee owns and operates a stationary secondary aluminum foundry and die casting operation plant.

Responsible Official: ~~Leonard J. Roselle~~ **General Manager**  
Source Address: 6378 U.S. Highway 6 West, Butler, Indiana 46721  
Mailing Address: P.O. Box 80, Butler, Indiana 46721  
SIC Code: 3365,3363,3341  
County Location: DeKalb  
County Status: Attainment for all criteria pollutants  
Source Status: Federally Enforceable State Operating Permit (FESOP)  
Minor Source, under PSD  
Minor Source, Section 112 of the Clean Air Act  
1 of 28 Source Categories

2. Sections A.2(c) (Emission Units and Pollution Control Equipment Summary) and A.3(a),(j),(p), and (q) (Insignificant Activities) are revised to include the new facilities that are the subject of this approval. The same changes are made respectively to the Sections D.1 and D.2 facility description boxes, and the insignificant activities listed in the Section D.1 box are deleted since they do not have specific applicable requirements under Section D.1:

#### A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

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This stationary source consists of the following emission units and pollution control devices:

- (c) One (1) reverberatory melt furnace identified as A3 with a maximum melt capacity of ~~4.25~~ **6.0** tons of aluminum per hour, **to be installed in 2003**, equipped with two (2) natural gas fired burners rated at ~~7.52~~ **24.0** MMBtu per hour total, exhausting through one (1) stack identified as E-3.

#### A.3 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-8-3(c)(3)(I)]

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This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour, as follows:
  - (1) ~~Thirty (30)~~ **Eighteen (18)** natural gas-fired crucible holding furnaces, individually identified as HF1, **HF2, HF15** through HF24, and HF28 through HF33, with a total combined maximum heat input rating of ~~24.9~~ **9.5** MMBtu per hour;
  - (2) Four (4) natural gas-fired reverberatory holding furnaces, individually identified as

- S1, S2, S3, and S4, each with a maximum heat input rating of 5.8 MMBtu per hour;
- (3) Two (2) natural gas-fired reverberatory holding furnaces, individually identified as H1 and H2, each with a maximum heat input rating of 1.48 MMBtu per hour and exhausting through one (1) stack identified as E-H; and
  - (4) Two (2) natural gas-fired heat treat furnaces, individually identified as HT1 and HT2, each with a maximum heat input rating of 0.3 MMBTU per hour.
- (j) Trimmers that do not produce fugitive emissions and that are equipped with a dust collection trim material recovery device such as a bag filter or cyclone, including:
- (1) two (2) sawing and trimming operations **for furnaces A1 through A13, excluding A3**, individually identified as C-1 and C-2, ~~with a combined maximum processing capacity of~~ **processing up to a total of** 3.8 tons aluminum per hour; and
  - (2) **sawing and trimming operation for furnace A3 processing up to 3.0 tons aluminum per hour,**
- ~~with each operation utilizing one (1)~~ **two (2)** cyclones for particulate matter control ~~and one (1) each exhausting through one (1) stack respectively identified as E-14 and E-15.~~
- (p) Other activities and categories with PM/PM10 emissions below the insignificant thresholds of five (5) pounds per hour or twenty-five (25) pounds per day:
- (1) Aluminum pouring and casting operations for furnaces A1 through A11, **excluding A3**, rated at ~~26.26~~ **18.01** tons of melted aluminum per hour.
  - (2) **Aluminum pouring and casting operation for furnace A3, identified as FLCA, rated at 6.0 tons of melted aluminum per hour.**
  - (23) Aluminum pouring and casting operation for furnaces A12 and A13, identified as ME Cell, rated at 7.0 tons of melted aluminum per hour.
- (q) **Twenty-three (23) electric crucible holding furnaces identified as HF3 - HF7a, HF7b, HF8 - HF14, and** ~~ten (10) electric crucible holding furnaces, individually identified as HF34 through HF43.~~

## SECTION D.1

## FACILITY OPERATION CONDITIONS

### Facility Descriptions [326 IAC 2-8-4(10)]:

- (a) One (1) reverberatory melt furnace identified as A1 with a maximum melt capacity of 3.83 tons of aluminum per hour, to be installed in July 2002, equipped with four (4) natural gas fired burners rated at 9.2 million British thermal units (MMBtu) per hour total, exhausting through one (1) stack identified as E1.
- (b) One (1) reverberatory melt furnace identified as A2 with a maximum melt capacity of 3.28 tons of aluminum per hour, to be installed in July 2002, equipped with three (3) natural gas fired burners rated at 7.86 million British thermal units (MMBtu) per hour total, exhausting through one (1) stack identified as E2.
- (c) One (1) reverberatory melt furnace identified as A3 with a maximum melt capacity of ~~4.25~~ **6.0** tons of aluminum per hour, **to be installed in 2003**, equipped with two (2) natural gas fired burners rated at ~~7.52~~ **24.0** MMBtu per hour total, exhausting through one (1) stack identified as E-3.
- (d) One (1) reverberatory melt furnace identified as A4 with a maximum melt capacity of 1.25 tons of aluminum per hour, equipped with three (3) natural gas fired burners rated at 10.05 MMBtu per hour total, exhausting through one (1) stack identified as E-4.
- (e) One (1) reverberatory melt furnace identified as A5 with a maximum melt capacity of 1.25 tons of aluminum per hour, equipped with two (2) natural gas fired burners rated at 6.7 MMBtu per hour total, exhausting through one (1) stack identified as E-5.
- (f) One (1) reverberatory melt furnace identified as A6 with a maximum melt capacity of 1.25 tons of aluminum per hour, equipped with three (3) natural gas fired burners rated at 10.05 MMBtu per hour total, exhausting through one (1) stack identified as E-6.
- (g) One (1) reverberatory melt furnace identified as A7 with a maximum melt capacity of 1.0 ton of aluminum per hour, equipped with two (2) natural gas fired burners rated at 5.2 MMBtu per hour total, exhausting through one (1) stack identified as E-7.
- (h) One (1) reverberatory melt furnace identified as A8 with a maximum melt capacity of 0.25 tons of aluminum per hour, equipped with one (1) natural gas fired burner rated at 2.5 MMBtu per hour, exhausting through one (1) stack identified as E-8.
- (i) One (1) reverberatory melt furnace identified as A9 with a maximum melt capacity of 2.5 tons of aluminum per hour, equipped with four (4) natural gas fired burners rated at 10.6 MMBtu per hour total, exhausting through one (1) stack identified as E-9.
- (j) One (1) reverberatory melt furnace identified as A10 with a maximum melt capacity of 2.5 tons of aluminum per hour, equipped with six (6) natural gas fired burners rated at 9.0 MMBtu per hour total, exhausting through one (1) stack identified as E-10.
- (k) One (1) reverberatory melt furnace identified as A11 with a maximum melt capacity of 0.9 tons of aluminum per hour, equipped with six (6) natural gas fired burners rated at 15.9 MMBtu per hour total, exhausting through one (1) stack identified as E-11.
- (l) One (1) reverberatory melt furnace identified as A12 with a maximum melt capacity of 3.5 tons of aluminum per hour, installed in June 1998, equipped with two (2) natural gas fired burners rated at 12.5 million British thermal units (MMBtu) per hour total, exhausting through one (1) stack identified as E-12.
- (m) One (1) reverberatory melt furnace identified as A13 with a maximum melt capacity of 3.5 tons of aluminum per hour, installed in June 1998, equipped with two (2) natural gas fired burners rated at 12.5 MMBtu per hour total, exhausting through one (1) stack identified as E-13.

~~The following insignificant activities, as defined in 326 IAC 2-7-1(21):~~

~~Natural gas fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour, as follows:~~

- ~~(a) Thirty (30) natural gas fired crucible holding furnaces, individually identified as HF1 through HF24 and HF28 through HF33, with a total combined maximum heat input rating of 21.9 MMBtu per hour;~~
- ~~(b) Four (4) natural gas fired reverberatory holding furnaces, individually identified as S1, S2, S3, and S4, each with a maximum heat input rating of 5.8 MMBtu per hour; and~~
- ~~(c) Two (2) natural gas fired reverberatory holding furnaces, individually identified as H1 and H2, each~~

~~with a maximum heat input rating of 1.48 MMBtu per hour and exhausting through one (1) stack identified as E-H.~~

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

## SECTION D.2 FACILITY OPERATION CONDITIONS

Facility Descriptions [326 IAC 2-8-4(10)]:

The following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6.
- (b) Trimmers that do not produce fugitive emissions and that are equipped with a dust collection trim material recovery device such as a bag filter or cyclone, including:
  - (1) two (2) sawing and trimming operations **for furnaces A1 through A13, excluding A3, individually identified as C-1 and C-2, with a combined maximum processing capacity of processing up to a total of 3.8 tons aluminum per hour; and**
  - (2) **sawing and trimming operation for furnace A3 processing up to 3.0 tons aluminum per hour,**

~~with each operation utilizing one (1) two (2) cyclones for particulate matter control and one (1) each exhausting through one (1) stack respectively identified as E-14 and E-15.~~
- (c) Other activities and categories with PM/PM10 emissions below the insignificant thresholds of five (5) pounds per hour or twenty-five (25) pounds per day:
  - (1) Aluminum pouring and casting operations for furnaces A1 through A11, **excluding A3, rated at 26.26 18.01 tons of melted aluminum per hour.**
  - (2) **Aluminum pouring and casting operation for furnace A3, identified as FLCA, rated at 6.0 tons of melted aluminum per hour.**
  - (23) Aluminum pouring and casting operation for furnaces A12 and A13, identified as ME Cell, rated at 7.0 tons of melted aluminum per hour.

**(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)**

- 3. A general re-formatting of Section D.1 is done to present the applicable requirements in a more logical order. This includes specifying the state rule requirements pursuant to 326 IAC 2-2 (PSD Minor), 326 IAC 2-8 (FESOP), and 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) ahead of the many new requirements for Subpart RRR, as appropriate. Specific changes attributable to this permit revision request are indicated below.



4. Condition D.1.3 (PSD Minor and FESOP Limits), now renumbered as D.1.1, is revised to account for the new heat input ratings on the natural gas fired burners associated with new replacement furnace A3. The condition is also revised to reflect a corrected PM emission factor of 4.3 lb/ton, based on AP-42, for untested reverberatory furnaces A2, A4, A6, A7, A8, A10, A11, and A12; and a single PM emission factor of 3.0 lb/ton for furnaces A1, A5, A9 and A13, which is based on prior validated testing for these units. Further, the total aluminum production rate is revised into two (2) separate limits that correspond to these two (2) short-term emission rates. The related quarterly production reporting forms are revised accordingly but are not reproduced herein. The condition is revised as follows:

**D.1.31 PSD Minor and FESOP Limits [326 IAC 2-2] ~~[40 CFR 52.21]~~[326 IAC 2-8]**

The source shall limit the total aluminum production in reverberatory melt furnaces A1 through A13 ~~such that as follows:~~

- (a) ~~The potential to emit particulate matter (PM) shall be limited to less than 89.4 tons per twelve (12) consecutive month period, based on the following formula:~~

$$\text{PM} = \text{(total metal produced, furnace A1)*EF}_{A1} + \text{(total metal produced, furnaces A3 to A11)*EF}_{A3,A11} + \text{(total metal produced, furnaces A2, A12 and A13)*EF}_{A2,A12,A13}$$

~~where: EF<sub>A1</sub> = emission factor (lb PM emitted per ton of metal produced, lb PM/ton) for furnace A1, which is equal to the lesser of the most recent stack test or Condition D.1.3(e).~~

~~EF<sub>A3,A11</sub> = emission factor (lb PM emitted per ton of metal produced, lb PM/ton) for furnaces A3 through A11, which is equal to the lesser of the most recent stack test or Condition D.1.3(d).~~

~~EF<sub>A2,A12,A13</sub> = emission factor (lb PM emitted per ton of metal produced, lb PM/ton) for furnaces A2, A12 and A13, which is equal to the lesser of the most recent stack test or Condition D.1.3(e).~~

**The total aluminum produced in reverberatory furnaces A2, A3, A4, A6, A7, A8, A10, A11, and A12 shall not exceed 30,474 tons per twelve (12) consecutive month period with compliance demonstrated at the end of each month, based on the following:**

- (1) PM emissions from each furnace shall not exceed 4.3 pounds of PM emitted per ton of metal produced which includes the aluminum refining (i.e., flux addition) stage at the end of the melt cycle; and**
- (2) PM-10 emissions from each furnace shall not exceed 2.6 pounds of PM-10 emitted per ton of metal produced which includes the aluminum refining (i.e., flux addition) stage at the end of the melt cycle.**

**This material usage limit is equivalent to limiting PM and PM10 emissions to 65.52 and 39.62 tons per year, respectively.**

- (b) ~~The potential to emit PM-10 shall be limited to less than 85.2 tons per twelve (12) consecutive month period, based on the following formula:~~

~~\_\_\_\_\_~~ 
$$PM_{10} = (\text{total metal produced, furnaces A1 to A13}) * EF_{A1, A13}$$

~~\_\_\_\_\_~~ where:  $EF_{A1, A13}$  = emission factor (lb PM-10 emitted per ton of metal produced, lb PM-10/ton) for furnaces A1 through A13 which is equal to the lesser of the most recent stack test or Condition D.1.3(f).

**The total aluminum produced in reverberatory furnaces A1, A5, A9, and A13 shall not exceed 15,942 tons per twelve (12) consecutive month period with compliance demonstrated at the end of each month, based on the following:**

- (1) PM emissions from each furnace shall not exceed 3.0 pounds of PM emitted per ton of metal produced which includes the aluminum refining (i.e., flux addition) stage at the end of the melt cycle; and**
- (2) PM-10 emissions from each furnace (A1 through A13) shall not exceed 2.6 pounds of PM-10 emitted per ton of metal produced which includes the aluminum refining (i.e., flux addition) stage at the end of the melt cycle.**

**This material usage limit is equivalent to limiting PM and PM10 emissions to 23.91 and 20.72 tons per year, respectively.**

- ~~(c) PM emissions from furnace A1 shall not exceed 2.6 pounds of PM emitted per ton of metal produced which includes the aluminum refining (i.e., flux addition) stage at the end of the melt cycle;~~
- ~~\_\_\_\_\_ (d) PM emissions from furnaces A3 through A11 shall not exceed 3.0 pounds of PM emitted per ton of metal produced which includes the aluminum refining (i.e., flux addition) stage at the end of the melt cycle;~~
- ~~\_\_\_\_\_ (e) PM emissions from furnaces A2, A12 and A13 shall not exceed 2.7 pounds of PM emitted per ton of metal produced which includes the aluminum refining (i.e., flux addition) stage at the end of the melt cycle;~~
- ~~\_\_\_\_\_ (f) PM-10 emissions from each furnace (A1 through A13) shall not exceed 2.6 pounds of PM-10 emitted per ton of metal produced which includes the aluminum refining (i.e., flux addition) stage at the end of the melt cycle.~~
- (c) These usage limits are required to limit the source-wide potential to emit both PM and PM-10 to less than 100 tons per twelve (12) consecutive month period. Compliance with this condition shall satisfy the requirements of 326 IAC 2-8-4 and also makes the requirements of 326 IAC 2-2 and 40 CFR 52.21 and 326 IAC 2-7 (Part 70) not applicable.**

5. Condition D.1.4 (Hazardous Air Pollutants), now renumbered as D.1.2, is revised such that the hexachloroethane usage limit for the chlorine-based flux accounts for the full chemical conversion of the chlorine in the hexachloroethane to hydrochloric acid (HCl) (i.e., 0.924 lb HCl/lb hexachloroethane used). Similarly, the condition is revised to include a new usage limit for a fluorine-based flux, SF-350, which will likewise assume full chemical conversion of the fluorine in the flux to HF (i.e., 0.2276 lb HF/lb SF350 type flux used). The related quarterly usage reporting form is revised and included herein at the end of this document. The condition is revised as follows:

**D.1.42 Hazardous Air Pollutants (HAPs) [326 IAC 2-8][40 CFR 63, Subpart RRR]**

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The aluminum refining (i.e., flux addition) stage at the end of the melt cycle flux usage in furnaces A1 through A13 shall be limited as follows:

(a) **For chlorine-based fluxing:**

- (1) The total hexachloroethane input usage in the fluxing process at furnaces A1 through A13 shall not exceed ~~56,237~~ **21,645** pounds per twelve (12) consecutive month period **with compliance demonstrated at the end of each month.** ~~The total amount of hexachloroethane used each month shall not exceed the difference between the annual limit minus the sum of actual hexachloroethane used during the previous eleven (11) months.~~
- (b)(2) Hydrochloric acid (HCl) emissions from each furnace shall not exceed ~~0.3343~~ **0.924** pounds of HCl emitted per pound of hexachloroethane used, **based on complete chemical conversion of chlorine in the hexachloroethane to HCl emitted.**

This material usage limit is equivalent to limiting single HAP (as HCl) emissions to less than 10 tons per year.

(b) **For fluorine-based fluxing:**

- (1) The total SF-350 type flux input usage at furnaces A1 through A13 shall not exceed 82,425 pounds per twelve (12) consecutive month period with compliance demonstrated at the end of each month.
- (2) Hydrogen fluoride (HF) emissions from each furnace shall not exceed 0.2276 pounds of HF emitted per pound of flux used, based on a maximum of 21.614 weight percent fluorine in the flux and complete chemical conversion of fluorine in the flux to HF emitted. Any change that increases the fluorine content in the flux shall require OAQ approval prior to making such a change.

This material usage limit is equivalent to limiting single HAP (as HF) emissions to less than 10 tons per year.

- (c) ~~This~~~~ese~~ usage limits ~~is~~ ~~are~~ required to limit the potential to emit of a single HAP to less than 10 tons per twelve (12) consecutive month period. Compliance with (a) and (b) of this condition shall also limit the source-wide potential to emit combined HAPs to less than 25 tons per 12 consecutive month period. ~~Therefore, the requirements of 326 IAC 2-7 (Part 70) do not apply.~~ **Compliance with this condition shall satisfy the requirements of 326 IAC 2-8-4 and the area source definition of 40 CFR 63, Subpart A.**
6. Condition D.1.5 (Particulate Matter), now renumbered as D.1.3, is revised to reflect the increased melting capacity for the new A3 replacement furnace. Additionally, the furnace melt capacities for A4 through A11 are incorrect and are revised to be consistent with the correct capacities as listed in both Section A.2 and the equipment description box of this Section D.1. The corresponding allowable emission rates are likewise revised. Finally, the 326 IAC 6-3 requirements are revised based on the rule changes that became effective on June 12, 2002.

**D.1.53 Particulate Matter (PM) [326 IAC 6-3-2(e)]**

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- (a) Pursuant to 326 IAC 6-3-2 ((~~Process Operations~~ **Particulate Emission Limitations for Manufacturing Processes**), the allowable **PM particulate** emission rate from the facilities shall be limited as follows:
- (1) The facility identified as A1 shall not exceed 10.08 pounds per hour when operating at a process weight rate of 3.83 tons per hour.
  - (2) The facility identified as A2 shall not exceed 9.09 pounds per hour when operating at a process weight rate of 3.28 tons per hour.
  - (3) The facility identified as A3 shall not exceed ~~4.84~~ **13.62** pounds per hour when operating at a process weight rate of ~~4.28~~ **6.0** tons per hour.
  - (4) The facility identified as A4 shall not exceed ~~4.84~~ **4.76** pounds per hour when operating at a process weight rate of ~~4.28~~ **1.25** tons per hour.
  - (5) The facility identified as A5 shall not exceed ~~4.84~~ **4.76** pounds per hour when operating at a process weight rate of ~~4.28~~ **1.25** tons per hour..
  - (6) The facility identified as A6 shall not exceed ~~4.84~~ **4.76** pounds per hour when operating at a process weight rate of ~~4.28~~ **1.25** tons per hour.
  - (7) The facility identified as A7 shall not exceed ~~4.49~~ **4.10** pounds per hour when operating at a process weight rate of 1.03 tons per hour.
  - (8) The facility identified as A8 shall not exceed ~~4.76~~ **1.08** pounds per hour when operating at a process weight rate of ~~0.28~~ **0.25** tons per hour.
  - (9) The facility identified as A9 shall not exceed ~~7.64~~ **7.58** pounds per hour when operating at a process weight rate of 2.53 tons per hour.
  - (10) The facility identified as A10 shall not exceed ~~7.64~~ **7.58** pounds per hour when operating at a process weight rate of 2.53 tons per hour.

- (11) The facility identified as A11 shall not exceed ~~3.94~~ **3.82** pounds per hour when operating at a process weight rate of 0.93 tons per hour.
- (12) The facility identified as A12 shall not exceed 9.49 pounds per hour when operating at a process weight rate of 3.5 tons per hour.
- (13) The facility identified as A13 shall not exceed 9.49 pounds per hour when operating at a process weight rate of 3.5 tons per hour.
- (b) The pounds per hour allowable ~~PM~~ **particulate** emission rates were calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

- 7. The **Emission Limitations and Standards** portion of Section D.1 is revised to include the applicable provisions of Subpart RRR, including the final rule revisions promulgated by EPA on September 24, 2002 (67 Federal Register 59787, September 24, 2002) and December 30, 2002 (67 Federal Register 79808, December 30, 2002). This portion of Section D.1 is revised as follows:

**D.1.14 General Provisions Relating to NESHAP [326 IAC 20-1][40 CFR Part 63, Subpart A]**

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The provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 20-1, apply to the furnaces except when otherwise specified in 40 CFR Part 63, Subpart RRR. These requirements become applicable to all Group 1 reverberatory and holding furnaces, **excluding A3**, on March 24, 2003. **These requirements become applicable to reverberatory furnaces A3 upon startup.** If any changes to 40 CFR 63, Subpart RRR are made effective between the date of issuance of this permit and March 24, 2003, the Permittee shall apply for a permit modification to incorporate the detailed requirements of the rule within 30 days after the changes noticed at 67 Fed. Reg. 41125 (June 14, 2002) are made effective. Notwithstanding any condition of this permit, for the purposes of determining compliance with this permit, the applicability, compliance deadlines and requirements of 40 CFR 63, Subpart RRR will be determined based on the regulatory provisions of that Subpart as they exist on any particular day of operation, taking into account any changes that have been made to regulations. **Compliance with D.1.2 makes this facility source** is an area source under Clean Air Act Section 112. Therefore, only the area source requirements of Subpart RRR apply to these facilities.

**D.1.2 Secondary Aluminum Production NESHAP Requirements [40 CFR Part 63 (Subpart RRR)]**

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- (a) Reverberatory melt furnaces A1 and A2 shall not commence operation until August 13, 2002. Therefore, pursuant to 67 Federal Register 41118, June 14, 2002 and 40 CFR 63.1501, the source shall comply with the applicable requirements of 40 CFR Part 63, Subpart RRR, by March 24, 2003.
- (b) The Group 1 reverberatory and holding furnaces at this source are subject to the requirements of this rule and shall comply with the requirements of this rule as they exist as of March 24, 2003 (the compliance date of the rule). If any changes to 40 CFR 63, Subpart RRR are made effective between the date of issuance of this permit and March 24,

~~2003, the Permittee shall apply for a permit modification to incorporate the detailed requirements of the rule within 30 days after the changes noticed at 67 Fed. Reg. 41125 (June 14, 2002) are made effective. Notwithstanding any condition of this permit, for the purposes of determining compliance with this permit, the applicability, compliance deadlines and requirements of 40 CFR 63, Subpart RRR will be determined based on the regulatory provisions of that Subpart as they exist on any particular day of operation, taking into account any changes that have been made to regulations.~~

**D.1.5 Part 70 Permit Application [40 CFR Part 63.1500 (Subpart RRR)][326 IAC 2-7-4(a)]**

Pursuant to 40 CFR 63.1500(e) and 326 IAC 2-7-4(a), the Permittee shall apply for a Part 70 operating permit no later than December 9, 2005.

**D.1.6 Secondary Aluminum Smelting Limits [40 CFR Part 63.1500 (Subpart RRR)]**

Effective March 23, 2004 for reverberatory furnaces A1, A2, and A4 through A13, and upon startup for reverberatory furnace A3, and pursuant to 40 CFR 63.1505(k)(3) and (5), the Permittee shall comply with the following emission limitations:

- (a) The Permittee shall not discharge or allow to be discharged to the atmosphere any 3-day, 24-hour rolling average emissions of total tetra-, penta-, hexa-, and octachlorinated dibenzo dioxins and furans (D/F) in excess of:

$$L_{cDF} = \frac{\sum_{i=1}^n (L_{tiDF} T_{ti})}{\sum_{i=1}^n T_{ti}}$$

where  $L_{tiDF}$  = The D/F emission limit for individual emission unit in the secondary aluminum processing unit; and

$L_{cDF}$  = The D/F emission limit for secondary aluminum processing unit.

The D/F emission limit ( $L_{cDF}$ ) for a Group 1 furnace without an in-line fluxer (reverberatory furnaces A1 through A13) at a secondary aluminum production facility shall be 15 Fg of D/F TEQ per Mg ( $2.1 \times 10^{-4}$  gr of D/F TEQ per ton) per ton of feed/charge or per ton of aluminum produced. Where TEQ is the toxicity equivalents for dioxins and furans as defined in "Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzop-Dioxins and -Dibenzofurans (CDDs and CDFs) and 1989 Update". [40 CFR 63.1503][40 CFR 63.1505(i)][40 CFR 63.1505(k)]

- (b) Identification, emission limits and means of compliance shall be posted on each furnace.

#### **D.1.7 Labeling [40 CFR Part 63.1506(b)]**

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The Permittee shall provide and maintain easily visible labels that shall be posted at the each furnace. Said labels shall identify the applicable emission limits and means of compliance, including:

- (a) The type of affected source or emission unit (e.g., group 1 furnace, group 2 furnace, in-line fluxer); and
- (b) The applicable operational standard(s) and control method(s) (work practice or control device). This includes, but is not limited to, the type of charge to be used for a furnace (e.g., clean scrap only, all scrap, etc.), flux materials and addition practices, and the applicable operating parameter ranges and requirements as incorporated in the OM&M plan.

#### **D.1.8 Operation, Maintenance, and Monitoring (OM&M) Plan [40 CFR Part 63.1510(b)]**

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The Permittee shall prepare and implement a written Operation, Maintenance, and Monitoring (OM&M) plan for each furnace and shall submit the plan to IDEM, OAQ, for review and approval. The OM&M plan shall be submitted by the compliance date established at § 63.1501(a) for the existing furnaces, and within ninety (90) days of the successful initial performance test for new furnace A3. Any subsequent changes to the plan shall be submitted to IDEM, OAQ, for review and approval. Pending approval of the initial or amended plan, the Permittee shall comply with the conditions of the submitted plan. The plan shall include the following information [§ 63.1510(b)]:

- (a) Process and control device parameters to be monitored to determine compliance, along with established operating levels or ranges, as applicable, for each process and control device.
- (b) A monitoring schedule for each affected source and emission unit.
- (c) Procedures for the proper operation and maintenance of each process unit and add-on control device used to meet the applicable emission limits or standards in § 63.1505.
- (d) Procedures for the proper operation and maintenance of monitoring devices or systems used to determine compliance, including:
  - (1) Calibration and certification of accuracy of each monitoring device, at least once every 6 months, according to the manufacturer's instructions; and
  - (2) Procedures for the quality control and quality assurance of continuous emission or opacity monitoring systems as required by the general provisions in subpart A of this part.
- (e) Procedures for monitoring process and control device parameters, including procedures for annual inspections of afterburners, and if applicable, the procedure to be used for determining charge/feed (or throughput) weight if a measurement device is not used.

- (f) **Corrective actions to be taken when process or operating parameters or add-on control device parameters deviate from the value or range established in paragraph (b)(1) of this section, including:**
  - (1) **Procedures to determine and record the cause of an deviation or excursion, and the time the deviation or excursion began and ended; and**
  - (2) **Procedures for recording the corrective action taken, the time corrective action was initiated, and the time/date corrective action was completed.**
- (g) **A maintenance schedule for each process and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.**
- (h) **Documentation of the work practice and pollution prevention measures used to achieve compliance with the applicable emission limits and a site-specific monitoring plan as required in § 63.1510(o) for each group 1 furnace not equipped with an add-on air pollution control device (i.e., furnaces A1 through A13).**

#### **D.1.9 Site-Specific Monitoring Plan [40 CFR Part 63.1510(o)]**

The Permittee shall develop, in consultation with IDEM, OAQ, a written site-specific monitoring plan for each furnace not equipped with an add-on air pollution control device (i.e., reverberatory furnaces A1 through A13). The site-specific monitoring plan shall be submitted to IDEM, OAQ, as part of the OM&M plan. The site-specific monitoring plan must contain sufficient procedures to ensure continuing compliance with all applicable emission limits and must demonstrate, based on documented test results, the relationship between emissions of D/F and the proposed monitoring parameters for that pollutant. Test data must establish the highest level of D/F that will be emitted from each furnace. This may be determined by conducting performance tests and monitoring operating parameters while charging the furnace with feed/charge materials containing the highest anticipated levels of oils and coatings and fluxing at the highest anticipated rate. If IDEM, OAQ, determines that any revisions of the site-specific monitoring plan are necessary to meet the requirements of this section or this subpart, the Permittee must promptly make all necessary revisions and resubmit the revised plan to IDEM, OAQ. The site-specific monitoring plan shall include the following information:

- (a) **Each site-specific monitoring plan shall document each work practice, equipment/design practice, pollution prevention practice, or other measure used to meet the applicable emission standards.**
- (b) **Each site-specific monitoring plan shall include provisions for unit labeling as required in § 63.1510(c), feed/charge weight measurement (or production weight measurement) as required in § 63.1510(e), and flux weight measurement as required in § 63.1510(j).**
- (c) **If a continuous emission monitoring system is included in a site-specific monitoring plan, the plan shall include provisions for the installation, operation, and maintenance of the system to provide quality-assured measurements in accordance with all applicable requirements of the general provisions in 40 CFR 63, Subpart A.**



- (d) If a continuous opacity monitoring system is included in a site-specific monitoring plan, the plan shall include provisions for the installation, operation, and maintenance of the system to provide quality-assured measurements in accordance with all applicable requirements of this subpart.
- (e) If a site-specific monitoring plan includes a scrap inspection program for monitoring the scrap contaminant level of furnace feed/charge materials, the plan shall include provisions for the demonstration and implementation of the program in accordance with all applicable requirements in § 63.1510(p).
- (f) If a site-specific monitoring plan includes a calculation method for monitoring the scrap contaminant level of furnace feed/charge materials, the plan shall include provisions for the demonstration and implementation of the program in accordance with all applicable requirements in § 63.1510(q).

#### **D.1.10 Preventive Maintenance Plan [326 IAC 2-7-5(13)]**

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A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and any control devices. If the OM&M and sites-specific plans required by Conditions D.1.8 and D.1.9 are developed in accordance with Section B - Preventive Maintenance Plans, then after the plans have been approved, they shall satisfy the requirements of this condition.

8. The **Compliance Determination Requirements** portion of Section D.1 is revised to include the applicable provisions of Subpart RRR, including the final rule revisions promulgated by EPA on September 24, 2002 (67 Federal Register 59787, September 24, 2002) and December 30, 2002 (67 Federal Register 79808, December 30, 2002). Condition D.1.6 (Testing Requirements) has been separated into two (2) different conditions, now renumbered as D.1.11 and D.1.12 to respectively reflect compliance with the PM/PM10 limits of the permit and Subpart RRR. The condition is also revised to remove the requirement for HAPs (HCI) testing and to remove obsolete language for testing already completed. This portion of Section D.1 is revised as follows:

#### **D.1.611 Testing Requirements [326 IAC 2-8-5(a)(1),(4)][326 IAC 2-1.1-11]**

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- (a) During the period within six (6) months after issuance of significant permit revision 033-14858 (i.e., January 4, 2002 through July 4, 2002), the Permittee shall perform initial testing on one (1) of the two (2) reverberatory furnaces A12 and A13 in accordance with paragraphs (c)(1) and (c)(2) of this condition to respectively demonstrate compliance with Conditions D.1.3 and D.1.4.
- (b) During the period within six (6) months after issuance of this significant permit revision 033-15396, the Permittee shall perform initial testing on reverberatory furnace A1 in accordance with paragraphs (c)(1) and (c)(2) of this condition to respectively demonstrate compliance with the emission factors of Conditions D.1.3(c), D.1.3(f) and D.1.4(b).
- (c) In order to demonstrate compliance with Conditions D.1.1 and D.1.3, the Permittee shall perform PM and PM10 testing according to the following schedule:
  - (a) Within ninety (90) days after issuance of this Significant Permit Revision No. 033-16754-00016 for furnaces A2, A4, A6, A7, A8, A10, A11, and A12; and within one-hundred eighty (180) days after startup for new furnace A3; and

- (b) During the period from July 2006 to November 2006, ~~the Permittee shall perform testing on reverberatory~~ for furnaces A1, A2, ~~one (1) of furnaces A3 through A6 A5, one (1) of furnaces A9 and A10, and one (1) of furnaces A12 and A13, as follows:~~

~~(1)~~ **PM and PM10 testing shall be performed** during metal melting and metal fluxing ~~the Permittee shall perform PM and PM-10 testing utilizing Methods 5 or 17 (40 CFR 60, Appendix A) for PM and Methods 201 or 201A and 202 (40 CFR 51, Appendix M) for PM-10, or other methods as approved by the Commissioner, to demonstrate compliance with Condition D.1.3.~~ **These tests shall be repeated at least once every two and one-half (2.5) years from the dates of the valid compliance demonstrations.** PM-10 includes filterable and condensable PM-10. **Testing shall be conducted in accordance with Section C - Performance Testing.**

- ~~(2) During the end of a melt cycle that encompasses the entire metal fluxing process, the Permittee shall perform HAP testing for hydrochloric acid utilizing Methods 18, 26A (40 CFR 60, Appendix A), or other methods as approved by the Commissioner, to demonstrate compliance with Condition D.1.4.~~

~~(d) Testing shall be repeated at least once every five years from the date of the valid compliance demonstration.~~

- ~~(e) In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.~~

#### **D.1.12 Testing Requirements [326 IAC 2-8-5(a)(1),(4)][326 IAC 2-1.1-11][40 CFR 63, Subpart RRR]**

**In order to demonstrate compliance with Condition D.1.6 and Subpart RRR, the Permittee shall:**

- (a) **Perform D/F testing within ninety (90) days after startup of new furnace A3, and by the § 63.1501(a) compliance date (i.e., March 24, 2003) for existing furnaces A1, A2, and A4-A13, all in accordance with the requirements in 40 CFR 63, Subpart A and 40 CFR 63, Subpart RRR. The Permittee shall use Method 23 in Appendix A to 40 CFR 60 or an alternative method approved by the Commissioner to measure the concentration of D/F. Testing shall be repeated on all furnaces every two and one-half (2.5) years from the dates of the valid compliance demonstrations. Testing shall be conducted in accordance with Section C - Performance Testing.**
- (b) **The Permittee shall establish a minimum or maximum operating parameter value, or an operating parameter range for each parameter to be monitored as required by 40 CFR 63.1510 that ensures compliance with the applicable emission limit for D/F. The Permittee may use existing data in addition to the results of the performance test to establish operating parameter values for compliance monitoring provided the requirements of 40 CFR 63.1511(g) are met [40 CFR 63.1511(g)].**

**D.1.13 Feed/Charge Determination [40 CFR Part 63.1506(d)]**

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Pursuant to 40 CFR 63.1506, the Permittee shall install and operate a device that measures and records or otherwise determine the weight of feed/charge (or throughput) for each operating cycle or time period used in the performance test. The Permittee shall operate each measurement system or other weight determination procedure in accordance with the Operation, Maintenance, and Monitoring Plan. Alternatively, the Permittee may choose to measure and record aluminum production weight from an affected emission unit rather than feed/charge weight provided that the aluminum production weight is measured for all emission units within a secondary aluminum processing unit and all calculations to demonstrate compliance with the emission limits for secondary aluminum processing units are based on aluminum production weight rather than feed/charge weight.

**D.1.14 Secondary Aluminum Smelting Compliance Determination [40 CFR Part 63, Subpart RRR]**

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Pursuant to 40 CFR Part 63.1510, the following conditions shall apply to each reverberatory furnace:

- (a) For each furnace, the Permittee shall [§ 63.1506(m)]:
  - (1) Maintain the total reactive flux injection rate for each operating cycle or time period used in the performance test at or below the average rate established during the performance test.
  - (2) Operate each furnace in accordance with the work practice/pollution prevention measures documented in the Operation, Maintenance, and Monitoring (OM&M) plan and within the parameter values or ranges established in the OM&M plan.
- (b) Pursuant to 63.1510(j), for each furnace the Permittee shall comply as follows:
  - (1) Install, calibrate, operate, and maintain a device to continuously measure and record the weight of gaseous or reactive liquid flux injected into each furnace.
    - (A) The monitoring system must record the weight for each fifteen (15) minute period, during which reactive fluxing occurs, over the same operating cycle or time period used in the performance test.
    - (B) The accuracy of the weight measurement shall be within one (1) percent of the weight of the reactive component of the flux being measured. The Permittee may apply to IDEM, OAQ, to use a weight measurement device of alternative accuracy in cases where the reactive flux flow rates are so low as to make the use of a weight measurement device of within one (1) percent accuracy impracticable.
    - (C) The Permittee shall verify the calibration of the weight measurement device in accordance with the schedule specified by the manufacturer, or if no calibration schedule is specified, at least once every six (6) months.

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- (2) Calculate and record the flux injection rate (kg/Mg or lb/ton) for each operating cycle or time period used in the performance test using the procedure in 40 CFR 63.1512(o).
    - (3) Record, for each fifteen (15) minute time period during each operating cycle or time period used in the performance test during which reactive fluxing occurs, the time, weight, and type of flux for each addition of reactive flux.
    - (4) Calculate and record the total reactive flux injection rate for each operating cycle or time period used in the performance test.
  - (c) Pursuant to 40 CFR 63.1510(s)(1), the Permittee shall include, within the OM&M plan prepared in accordance with 40 CFR 63.1510(b), the following information:
    - (1) The identification of each emission unit in the secondary aluminum processing unit (SAPU);
    - (2) The specific control technology of pollution prevention measure to be used for each emission unit in the SAPU and the date of its installation or application;
    - (3) The emission limit calculated for each SAPU and performance test result with supporting calculations demonstrating initial compliance with each applicable emission limit;
    - (4) Information and data demonstrating compliance for each emission unit with all applicable design equipment work practice or operational standards of Subpart RRR; and
    - (5) The monitoring requirements applicable to each emission unit in a SAPU and the monitoring procedures for daily calculation of the 3-day, 24-hour rolling average using the procedure in 40 CFR 63.1510(t).
  - (d) The SAPU compliance procedures within the OM&M plan shall not contain any of the information provided in 40 CFR 63.1510(s)(2)(i) through (iv). [40 CFR 63.1510(s)(2)]
  - (e) To revise the SAPU compliance provisions within the OM&M plan prior to the end of the permit term, the owner or operator must submit a request to the applicable permitting authority containing the information required by paragraph (s)(1) of this section and obtain approval of the applicable permitting authority prior to implementing any revisions. [40 CFR 61.1510(s)(3)]
9. The **Compliance Monitoring Requirements** portion of Section D.1 is revised to include the applicable provisions of Subpart RRR, including the final rule revisions promulgated by EPA on September 24, 2002 (67 Federal Register 59787, September 24, 2002) and December 30, 2002 (67 Federal Register 79808, December 30, 2002). Condition D.1.7 (Visible Emissions Notations) is renumbered as D.1.15 without replication below. This portion of Section D.1 is revised as follows:

**D.1.16 Labeling [40 CFR Part 63.1510(c)]**

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The Permittee shall inspect the labels for each furnace at least once per calendar month to confirm that posted labels as required by the operational standard in § 63.1506(b) are intact and legible. [§ 63.1510(c)].

**D.1.17 Feed/Charge Determination [40 CFR Part 63.1510(e)]**

---

The Permittee shall install, calibrate, operate, and maintain a device to measure and record the total weight of feed/charge to, or the aluminum production from each furnace over the same operating cycle or time period used in the performance test. Feed/charge or aluminum production within SAPUs must be measured and recorded on an emission unit-by-emission unit basis. The accuracy of the weight measurement device or procedure must be  $\pm 1$  percent of the weight being measured.

**D.1.18 Corrective Action [40 CFR Part 63.1506(p)]**

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When a process parameter deviates from the value or range established during the performance test and incorporated in the Operation, Maintenance, and Monitoring Plan, the Permittee shall initiate corrective action. The corrective action shall restore operation of the affected emission unit (including the process or control device) to its normal or usual mode of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. Corrective actions taken shall include follow-up actions necessary to return the process or control device parameter level(s) to the value or range of values established during the performance test and steps to prevent the likely recurrence of the cause of the deviation [§ 63.1506(p)].

**D.1.19 Compliance Monitoring Requirements [40 CFR Part 63.1510(t)] [40 CFR Part 63.1510(u)]**

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Pursuant to 40 CFR Subpart RRR, on and after the compliance date, the Permittee shall monitor all emission units and control equipment according to the following requirements [§ 63.1510(a)]:

- (a) The Permittee shall calculate and record the 3-day, 24- hour rolling average emissions of D/F for each furnace on a daily basis. To calculate the 3-day, 24-hour rolling average, the Permittee shall [§ 63.1510(t)]:
  - (1) Calculate and record the total weight of material charged to each furnace for each twenty-four- (24-) hour day of operation using the feed/charge weight data collected as required under Subpart RRR.
  - (2) To provide emissions for each furnace for the twenty-four- (24-) hour period, in pounds: multiply the total feed/charge weight to the furnace or the weight of aluminum produced by the furnace for the twenty-four- (24-) hour period, by the emission rate (in lb/ton of feed/charge) for that furnace (as determined during the emission test).
  - (3) Calculate and record the three- (3-) day, twenty-four- (24-) hour rolling average for each pollutant each day by summing the daily emission rates for D/F over the three (3) most recent consecutive days and dividing by three (3).
- (b) As an alternative to the procedures in (a) above, the Permittee may demonstrate through performance tests, that each individual furnace is in compliance with the applicable emission limit [40 CFR 63.1510(u)].

10. The **Record Keeping and Reporting Requirements** portion of Section D.1 is revised to include the applicable provisions of Subpart RRR, including the final rule revisions promulgated by EPA on September 24, 2002 (67 Federal Register 59787, September 24, 2002) and December 30, 2002 (67 Federal Register 79808, December 30, 2002). Condition D.1.8 (Record Keeping Requirements) is renumbered as D.1.20. This portion of Section D.1 is revised as follows:

**D.1.820 Record Keeping Requirements**

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- (a) To document compliance with Condition D.1.31, the Permittee shall maintain records in accordance with (1) and (53) below. **Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.**
- (1) Calendar dates covered in the compliance determination period;
  - (2) ~~Actual~~ Total aluminum produced in furnaces ~~A1-A14~~ **A2, A3, A4, A6, A7, A8, and A10 - A12** for each month; **and**
  - (3) ~~Actual~~ Total aluminum produced in furnaces ~~A12-A13~~ **A1, A5, A9, and A13** for each month.
  - ~~(4) The PM and PM10 emission factors applied in Conditions D.1.3(a) and (b), respectively, for each month; and~~
  - ~~(5) The emitted PM and PM10 for each month of the compliance determination period.~~
- (b) To document compliance with Condition D.1.42, the Permittee shall maintain records in accordance with (1) and (24) below. **Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.**
- (1) Calendar dates covered in the compliance determination period; **and**
  - (2) ~~Actual~~ Total hexachloroethane input usage **at furnaces A1 through A13** and the ~~emitted hydrochloric acid for each month; of the compliance determination period.~~
  - (3) **Total SF-350 type flux input usage at furnaces A1 through A13 for each month; and**
  - (4) **The total weight of HCl and HF, each as a single HAP, emitted for each compliance period. This determination shall be based on complete (100%) chemical conversion of chlorine in the hexachloroethane in the flux to HCl emitted, and complete (100%) chemical conversion of fluorine in the flux to HF emitted based on 21.614 weight percent fluorine in the flux.**
- (c) To document compliance with Condition D.1.714, the Permittee shall maintain records of once per shift visible emission notations of the reverberatory melt furnace exhaust stacks.
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

**D.1.21 Secondary Aluminum Production Record Keeping Requirements [40 CFR Part 63, Subpart RRR]**

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Pursuant to 40 CFR Part 63.1517, the Permittee shall:

- (a) As required by 40 CFR 63.10(b), the Permittee shall maintain files of all information (including all reports and notifications) required by the general provisions and Subpart RRR.
- (b) The Permittee shall retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records must be retained at the facility. The remaining 3 years of records may be retained off site.
- (c) The Permittee may retain records on microfilm, computer disks, magnetic tape, or microfiche; and report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.
- (d) In addition to the general records required by 40 CFR 63.1510(b), the Permittee of an affected unit, including an emission unit in a secondary aluminum processing unit (i.e., furnaces A1 through A13) must maintain records of:
  - (1) For each group 1 furnace at this source, records of 15-minute block average weights of gaseous or liquid reactive flux injection, total reactive flux injection rate and calculations (including records of the identity, composition, and weight of each addition of gaseous, liquid or solid reactive flux), including records of any period the rate exceeds the compliant operating parameter value and corrective action taken.
  - (2) For each continuous monitoring system, records required by 40 CFR 63.10(c).
  - (3) For each furnace as a unit subject to an emission standard in kg/Mg (lb/ton) of feed/charge, records of feed/charge (or throughput) weights for each operating cycle or time period used in the performance test.
  - (4) Approved site-specific monitoring plan for each furnace, as a group 1 furnace without an add-on pollution control device, with records documenting conformance with the plan.
  - (5) Records of monthly inspections for proper unit labeling for each affected source and emission unit subject to labeling requirements.
  - (6) Records for any approved alternative monitoring or test procedure.
  - (7) Current copy of all required plans, including any revisions, with records documenting conformance with the applicable plan, including:
    - (i) Startup, shutdown, and malfunction plan;



- (ii) For major sources, OM&M plan; and
  - (iii) Site-specific secondary aluminum processing unit emission plan.
- (8) For each furnace, records of total charge weight for each 24-hour period and calculations of 3-day, 24-hour rolling average emissions.

**D.1.22 Secondary Aluminum Production Record Keeping Requirements [40 CFR Part 63, Subpart RRR]**

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- (a) Pursuant to 40 CFR 63.1510 and 63.1516, the Permittee shall provide notification of the anticipated date for conducting performance tests. The Permittee shall notify IDEM, OAQ, of the intent to conduct a performance test at least 60 days before the performance test is scheduled.
- (b) Pursuant to 40 CFR 63.1515(b), the Permittee shall submit a notification of compliance status report within 60 days after the compliance date specified in 40 CFR 63.1501, except within 90 days after conducting the initial performance test required by § 63.1511(b) for new furnace A3. The notification must be signed by the responsible official who must certify its accuracy. A complete notification of compliance status report must include the information specified in paragraphs (a)(1) through (10) of this section. The required information may be submitted in an operating permit application, in an amendment to an operating permit application, in a separate submittal, or in any combination. In a State with an approved operating permit program where delegation of authority under section 112(l) of the CAA has not been requested or approved, the owner or operator must provide duplicate notification to the applicable Regional Administrator. If a Permittee submits the information specified in this section at different times or in different submittals, later submittals may refer to earlier submittals instead of duplicating and resubmitting the information previously submitted. A complete notification of compliance status report must include:
  - (1) All information required in 40 CFR 63.9(h). The Permittee shall provide a complete performance test report for each furnace for which a performance test is required. A complete performance test report includes all data, associated measurements, and calculations (including visible emission and opacity tests).
  - (2) The approved site-specific test plan and performance evaluation test results for each continuous monitoring system.
  - (3) Unit labeling as described in 40 CFR 63.1506(b), including process type or furnace classification and operating requirements.
  - (4) The compliant operating parameter value or range established for furnace with supporting documentation and a description of the procedure used to establish the value (e.g., total reactive chlorine flux injection rate), including the operating cycle or time period used in the performance test.
  - (5) If applicable, design information and analysis, with supporting documentation, demonstrating conformance with the requirements for capture/collection systems in 40 CFR 63.1506(c).

- A report must be submitted if any of these conditions occur during a 6-month reporting period:**

- (1) An excursion of a compliant process or operating parameter value or range (e.g., total reactive chlorine flux injection rate, definition of acceptable scrap, or other approved operating parameter).
- (2) An action taken during a startup, shutdown, or malfunction was not consistent with the procedures in the plan as described in 40 CFR 63.6(e)(3).
- (3) An affected source (including an emission unit in a secondary aluminum processing unit) was not operated according to the requirements of Subpart RRR.
- (4) A deviation from the 3-day, 24-hour rolling average emission limit for a secondary aluminum processing unit.

- (e) **The Permittee shall submit the results of any performance test conducted during the reporting period, including one complete report documenting test methods and procedures, process operation, and monitoring parameter ranges or values for each test method used for a particular type of emission point tested [40 CFR 63.1516(b)].**
- (f) **For the purpose of annual certifications of compliance required by 40 CFR Part 70 or 71, the Permittee shall certify continuing compliance based upon, but not limited to, the following conditions [40 CFR 63.1516(c)]:**
  - (1) **Any period of excess emissions, as defined in the semiannual report, that occurred during the year were reported as required by this subpart; and**
  - (2) **All monitoring, record keeping, and reporting requirements were met during the year.**

#### **D.1.923 Reporting Requirements**

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A quarterly summary of the information to document compliance with Conditions D.1.31 and D.1.42 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the calendar quarter being reported.

11. Condition D.2.1 (Particulate Matter) is revised to reflect the new facilities. Also, the 326 IAC 6-3 requirements are revised based on the rule changes that became effective on June 12, 2002.

#### **D.2.1 Particulate Matter (PM) [326 IAC 6-3-2]**

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- (a) Pursuant to 326 IAC 6-3-2 (~~(Process Operations~~ **Particulate Emission Limitations for Manufacturing Processes**), the allowable **PM particulate** emission rate from the sawing and trimming operations identified as C-1 and C-2 shall not exceed 10.0 pounds per hour when operating at a process weight rate of 3.8 tons per hour.
- (b) **Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the sawing and trimming operation for furnace A3 shall not exceed 8.6 pounds per hour when operating at a process weight rate of 3.0 tons per hour.**
- (c) Pursuant to 326 IAC 6-3-2 (**Particulate Emission Limitations for Manufacturing Processes**), the allowable **PM particulate** emission rate from the pouring and casting operation for furnaces A1 through A11, **excluding A3**, shall not exceed ~~36.62~~ **28.4** pounds per hour when operating at a process weight rate of ~~26.26~~ **18.01** tons per hour.
- (d) **Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the FLCA pouring and casting operation shall not exceed 13.6 pounds per hour when operating at a process weight rate of 6.0 tons per hour.**
- (ee) Pursuant to 326 IAC 6-3-2 (**Particulate Emission Limitations for Manufacturing Processes**), the allowable **PM particulate** emission rate from the ME Cell pouring and casting operation shall not exceed 15.1 pounds per hour when operating at a process weight rate of 7.0 tons per hour.

- (df) The pounds per hour allowable ~~PM~~ **particulate** emission rates were calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

12. Condition D.2.2(f) is revised to correct a minor grammatical error.

#### D.2.2 Volatile Organic Compounds (VOC)

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Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), the owner or operator shall:

- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a ~~matter~~ **manner** that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.
13. Section D.3 is removed from the permit. This section established Construction Conditions for reverberatory melt furnaces A1 and A2 which were installed in July 2002. The requirements of this section are now obsolete and D.3 is deleted without replication herein.
14. Condition C.2 (Particulate Matter) is updated to reflect revisions that were made to the rule that became effective on June 12, 2002:

#### C.2 Particulate ~~Matter~~ Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour ~~[40 CFR 52 Subpart P]~~ **326 IAC 6-3-2(e)**

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~~Pursuant to 326 IAC 6-3-2(c), the allowable particulate matter emissions rate from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour.~~

- (a) **Pursuant to 40 CFR 52 Subpart P, particulate matter emissions from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour.**
- (b) **Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour. This condition is not federally enforceable.**

#### Conclusion

This proposed revision to this secondary aluminum foundry and die casting source shall be subject to the conditions of the attached proposed Significant Permit Revision No. 033-16754-00016.

**Date:** March 2003

Total Controlled/Limited Emissions based on rated capacity assuming limited operations, after controls (see Section D.1 for detailed conditions limiting source emissions)

Appendix A: Emission Calculations  
Natural Gas Combustion - Existing Furnace Burners

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Company Name: Citation Bohn Aluminum Corporation  
Address City IN Zip: 6378 U.S. Highway 6 West, Butler, IN 46721  
FESOP No.: 033-7938-00016  
Significant Permit Revision No.: 033-16754-00016  
Reviewer: Michael Hirtler  
Date: March 2003

Combustion Unit Type	Individual Capacity MMBtu/hr	Total Capacity MMBtu/hr	Potential Thruput MMCF/yr	Emission Factor in lb/MMCF						Potential Emission Rate in tons/year					
				PM	PM10*	SO2	NOx**	VOC	CO***	PM	PM10	SO2	NOx	VOC	CO
Reverb. Furnace A1 (4 Burners)	2.30	9.20	80.59	1.9	7.6	0.6	100.0	5.5	84.0	0.08	0.31	0.02	4.03	0.22	3.38
Reverb. Furnace A2 (3 Burners)	2.62	7.86	68.85	1.9	7.6	0.6	100.0	5.5	84.0	0.07	0.26	0.02	3.44	0.19	2.89
Reverb. Furnace A4 (3 Burners)	3.35	10.05	88.04	1.9	7.6	0.6	100.0	5.5	84.0	0.08	0.33	0.03	4.40	0.24	3.70
Reverb. Furnace A5 (2 Burners)	3.35	6.70	58.69	1.9	7.6	0.6	100.0	5.5	84.0	0.06	0.22	0.02	2.93	0.16	2.47
Reverb. Furnace A6 (3 Burners)	3.35	10.05	88.04	1.9	7.6	0.6	100.0	5.5	84.0	0.08	0.33	0.03	4.40	0.24	3.70
Reverb. Furnace A7 (2 Burners)	2.60	5.20	45.55	1.9	7.6	0.6	100.0	5.5	84.0	0.04	0.17	0.01	2.28	0.13	1.91
Reverb. Furnace A8 (1 Burner)	2.50	2.50	21.90	1.9	7.6	0.6	100.0	5.5	84.0	0.02	0.08	0.01	1.10	0.06	0.92
Reverb. Furnace A9 (4 Burners)	2.65	10.60	92.86	1.9	7.6	0.6	100.0	5.5	84.0	0.09	0.35	0.03	4.64	0.26	3.90
Reverb. Furnace A10 (6 Burners)	1.50	9.00	78.84	1.9	7.6	0.6	100.0	5.5	84.0	0.07	0.30	0.02	3.94	0.22	3.31
Reverb. Furnace A11 (6 Burners)	2.65	15.90	139.28	1.9	7.6	0.6	100.0	5.5	84.0	0.13	0.53	0.04	6.96	0.38	5.85
Reverb. Furnace A12 (2 Burners)	6.25	12.50	109.50	1.9	7.6	0.6	100.0	5.5	84.0	0.10	0.42	0.03	5.48	0.30	4.60
Reverb. Furnace A13 (2 Burners)	6.25	12.50	109.50	1.9	7.6	0.6	100.0	5.5	84.0	0.10	0.42	0.03	5.48	0.30	4.60
Crucible Holding Furnace 1 (1 Burner)	0.50	0.50	4.38	1.9	7.6	0.6	100.0	5.5	84.0	0.00	0.02	0.00	0.22	0.01	0.18
Crucible Holding Furnace 2 (1 Burner)	0.50	0.50	4.38	1.9	7.6	0.6	100.0	5.5	84.0	0.00	0.02	0.00	0.22	0.01	0.18
Crucible Holding Furnace 15 (2 Burners)	0.50	1.00	8.76	1.9	7.6	0.6	100.0	5.5	84.0	0.01	0.03	0.00	0.44	0.02	0.37
Crucible Holding Furnace 16 (2 Burners)	0.50	1.00	8.76	1.9	7.6	0.6	100.0	5.5	84.0	0.01	0.03	0.00	0.44	0.02	0.37
Crucible Holding Furnace 17 (1 Burner)	0.30	0.30	2.63	1.9	7.6	0.6	100.0	5.5	84.0	0.00	0.01	0.00	0.13	0.01	0.11
Crucible Holding Furnace 18 (1 Burner)	0.30	0.30	2.63	1.9	7.6	0.6	100.0	5.5	84.0	0.00	0.01	0.00	0.13	0.01	0.11
Crucible Holding Furnace 19 (1 Burner)	0.30	0.30	2.63	1.9	7.6	0.6	100.0	5.5	84.0	0.00	0.01	0.00	0.13	0.01	0.11
Crucible Holding Furnace 20 (1 Burner)	0.50	0.50	4.38	1.9	7.6	0.6	100.0	5.5	84.0	0.00	0.02	0.00	0.22	0.01	0.18
Crucible Holding Furnace 21 (1 Burner)	0.50	0.50	4.38	1.9	7.6	0.6	100.0	5.5	84.0	0.00	0.02	0.00	0.22	0.01	0.18
Crucible Holding Furnace 22 (2 Burners)	0.50	1.00	8.76	1.9	7.6	0.6	100.0	5.5	84.0	0.01	0.03	0.00	0.44	0.02	0.37
Crucible Holding Furnace 23 (1 Burner)	0.50	0.50	4.38	1.9	7.6	0.6	100.0	5.5	84.0	0.00	0.02	0.00	0.22	0.01	0.18
Crucible Holding Furnace 24 (1 Burner)	0.50	0.50	4.38	1.9	7.6	0.6	100.0	5.5	84.0	0.00	0.02	0.00	0.22	0.01	0.18
Crucible Holding Furnace 28 (1 Burner)	0.30	0.30	2.63	1.9	7.6	0.6	100.0	5.5	84.0	0.00	0.01	0.00	0.13	0.01	0.11
Crucible Holding Furnace 29 (1 Burner)	0.30	0.30	2.63	1.9	7.6	0.6	100.0	5.5	84.0	0.00	0.01	0.00	0.13	0.01	0.11
Crucible Holding Furnace 30 (1 Burner)	0.50	0.50	4.38	1.9	7.6	0.6	100.0	5.5	84.0	0.00	0.02	0.00	0.22	0.01	0.18
Crucible Holding Furnace 31 (1 Burner)	0.50	0.50	4.38	1.9	7.6	0.6	100.0	5.5	84.0	0.00	0.02	0.00	0.22	0.01	0.18
Crucible Holding Furnace 32 (1 Burner)	0.50	0.50	4.38	1.9	7.6	0.6	100.0	5.5	84.0	0.00	0.02	0.00	0.22	0.01	0.18
Crucible Holding Furnace 33 (1 Burner)	0.50	0.50	4.38	1.9	7.6	0.6	100.0	5.5	84.0	0.00	0.02	0.00	0.22	0.01	0.18
Holding Furnace H-1 (1 Burner)	1.48	1.48	12.96	1.9	7.6	0.6	100.0	5.5	84.0	0.01	0.05	0.00	0.65	0.04	0.54
Holding Furnace H-2 (1 Burner)	1.48	1.48	12.96	1.9	7.6	0.6	100.0	5.5	84.0	0.01	0.05	0.00	0.65	0.04	0.54
Reverb. Holding Furnace S1 (1 Burner)	5.80	5.80	50.81	1.9	7.6	0.6	100.0	5.5	84.0	0.05	0.19	0.02	2.54	0.14	2.13
Reverb. Holding Furnace S2 (1 Burner)	5.80	5.80	50.81	1.9	7.6	0.6	100.0	5.5	84.0	0.05	0.19	0.02	2.54	0.14	2.13
Reverb. Holding Furnace S3 (1 Burner)	5.80	5.80	50.81	1.9	7.6	0.6	100.0	5.5	84.0	0.05	0.19	0.02	2.54	0.14	2.13
Reverb. Holding Furnace S4 (1 Burner)	5.80	5.80	50.81	1.9	7.6	0.6	100.0	5.5	84.0	0.05	0.19	0.02	2.54	0.14	2.13
Heat Treat Furnace 4 (1 Burner)	0.30	0.30	2.63	1.9	7.6	0.6	100.0	5.5	84.0	0.00	0.01	0.00	0.13	0.01	0.11
Heat Treat Furnace 5 (1 Burner)	0.30	0.30	2.63	1.9	7.6	0.6	100.0	5.5	84.0	0.00	0.01	0.00	0.13	0.01	0.11
Uncontrolled Potential to Emit (tons per year)		131.26	1149.84							1.09	4.37	0.34	57.49	3.16	48.29

Methodology

\*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

\*\*Emission Factors for NOx: Uncontrolled = 94 for heat input capacity < 0.3 MMBtu/hr; = 100 for heat input capacity >= 0.3 MMBtu/hr

\*\*\*Emission Factors for CO: Uncontrolled = 40 for heat input capacity < 0.3 MMBtu/hr; = 84 for heat input capacity >= 0.3 MMBtu/hr

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Thruput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPL. D 7/98)

Emission (tons/yr) = Thruput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

NOTE: These burners have not been modified as part of this significant permit revision, except that the burner emissions from existing reverberatory furnace A-3 has been removed and crucible holding furnaces 3-14 are removed from this source in this approval. Natural gas combustion emissions from the burners on the new A-3 replacement furnace are included on TSD Appendix A, page 2 of 6.

Potential Hazardous Air Pollutant (HAP) Emissions

Emission Factor in lb/MMcf	HAPs - Organics			HAPs - Metals							Total all HAPs (tons/yr)
	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03	
Potential Emission all combustion units (tons per year):	1.207E-03	6.899E-04	4.312E-02	1.035E+00	1.955E-03	2.875E-04	6.324E-04	8.049E-04	2.185E-04	1.207E-03	1.085E+00

Methodology

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.

**Appendix A: Emission Calculations**  
**Natural Gas Combustion - New Furnace A3 Burners**

**Company Name:** Citation Bohn Aluminum Corporation  
**Address City IN Zip:** 6378 U.S. Highway 6 West, Butler, IN 46721  
**FESOP No.:** 033-7938-00016  
**Significant Permit Revision No.:** 033-16754-00016  
**Reviewer:** Michael Hirtler  
**Date:** March 2003

Combustion Unit Type	Total Capacity MMBtu/hr	Potential Thruput MMCF/yr	Emission Factor in lb/MMCF						Potential Emission Rate in tons/year					
			PM*	PM10*	SO2	NOx**	VOC	CO***	PM	PM10	SO2	NOx	VOC	CO
Reverb. Furnace A3 (2 Burners)	24.0	210.24	1.9	7.6	0.6	100.0	5.5	84.0	0.20	0.80	0.06	10.51	0.58	8.83
Uncontrolled Potential to Emit: (tons per year)	24.0	210.24							0.20	0.80	0.06	10.51	0.58	8.83

**Methodology**

\*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

\*\*Emission Factors for NOx: Uncontrolled = 94 for heat input capacity < 0.3 MMBtu/hr; = 100 for heat input capacity =>0.3 MMBtu/hr

\*\*\*Emission Factors for CO: Uncontrolled = 40 for heat input capacity < 0.3 MMBtu/hr; = 84 for heat input capacity =>0.3 MMBtu/hr

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-03 (SUPPL. D 7/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

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**Potential Hazardous Air Pollutant (HAP) Emissions**

Emission Factor in lb/MMcf	HAPs - Organics			HAPs - Metals							Total all HAPs (tons/yr)
	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03	
Potential Emission all combustion units (tons per year):	2.208E-04	1.261E-04	7.884E-03	1.892E-01	3.574E-04	5.256E-05	1.156E-04	1.472E-04	3.995E-05	2.208E-04	1.984E-01

**Methodology**

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.





## Appendix A: Secondary Metal Production - Aluminum

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Company Name: Citation Bohn Aluminum Corporation  
Address City IN Zip: 6378 U.S. Highway 6 West, Butler, IN 46721  
FESOP No.: 033-7938-00016  
Significant Permit Revision 033-16754-00016  
Reviewer: Michael Hirtler  
Date: March 2003

## POTENTIAL CONTROLLED/LIMITED EMISSION RATES FOR THE ENTIRE SOURCE INCLUDING EXISTING FURNACES A1, A2, &amp; A4-A13, PLUS NEW FURNACE A3 \*

## Smelting Furnace/Reverberatory

		Total Limited ***		Total Limited ***		other activities) = 85.55 tpy. Next, furnace metal production is limited for both the furnaces that have not stack tested and that rely on the AP-42 emission factor (4.3 lb/ton), and for the furnaces that have tested and that rely on a factor derived from testing (3.0 lb/ton), such that total smelting emissions are limited to less than 89.4 tons/year of PM and 85.5 tpy of PM10. The limited metal production rate is determined using the ratio 89.4/3544.49 (i.e., limited/uncontrolled PM emission rate for all 13 furnaces) multiplied by the ratio of 17.08/32.26 for the group of untested furnaces, and multiplied by the ratio of 15.18/32.26 for the group of tested furnaces. This is reflected at Condition D.1.3, where compliance with Condition D.1.3 will result in compliance with 326 IAC 2-8 (FESOP) for PM10, and also 326 IAC 2-2 (PSD) for PM will not apply.						
TYPE OF MATERIAL	Total Potential Metal Production Rate	Metal Production Rate Untested Furnaces	Metal Production Rate Tested Furnaces									
Aluminum	32.26	30,474.62	15,942.34									
	tons metal/hour	tons metal/year	tons metal/year									
Emissions Unit	Maximum Furnace Melt Rate	Emission Factor		Potential Controlled/Limited Emission Rate (tons/yr)		Potential Controlled/Limited HAP Emission Rate (tons/year) ****						
	tons/hour	PM lbs/ton metal produced	PM 10 lbs/ton metal produced	PM tons/year	PM 10 tons/year	Chromium tons/year	Cobalt tons/year	Lead tons/year	Manganese tons/year	Nickel tons/year	D/F tons/year	Total HAPs tons/year
New Reverberatory Furnace A3	6.00	4.3	2.6									
Existing Rev. Furnaces A2-A4, A6-A8, A10-A12*	15.18	4.3	2.6									
Existing Rev. Furnaces A1, A5, A9, A13**	11.08	3.0	2.6									
Total Potential Controlled/Limited Emissions (tons/year):				89.43	85.55	0.087	0.087	0.087	0.954	0.954	6.10E-03	2.17

\* These existing furnaces have not conducted stack testing and the PM emission factor is taken from AP-42, 5th Ed., Suppl. B Table 12.8-3.

\*\*\*\* Metals factors from US EPA Speciate 3.2 program for aluminum foundry-reverberatory furnace profile, with HAP emissions provided as mass percent of total PM (i.e., 0.097% for chromium, cobalt and lead; &amp; 1.067% for manganese and nickel). Dioxin/furan (D/F) emission factor of 2.1E-4 gr/ton from Table 2 of Subpart RRR.

\*\* These existing furnaces have already conducted stack testing and the PM emission factor is a by-product of that testing.

## Flux Addition During Metal Smelting

TYPE OF MATERIAL	Potential Throughput of HMC-4 Flux	Potential Throughput of WF HB2 Flux	Potential Throughput of SF-350 Flux	Limited Throughput of ** HMC-4 Flux	Limited Throughput of ** WF HB2 Flux	Limited Throughput of ** SF-350 Flux	emissions from the flux containing hexachloroethane, the amount of flux used is assumed as the greater of HMC-4 and WF HB2, which respectively contain 93% (wt) and 25% (wt) HEX. Based on full conversion of the fluorine (21.614%, wt) in the non-chlorine flux (SF-350) to HF, the total non-chlorine flux usage is limited to 82,425 pounds per 12 consecutive month period.	
	Flux							
	lb/hour	lb/hour	lb/hour	lb/year	lb/year	lb/year		
	26,925	43,075	120,98	23,274	85,580	82,425		
Emission Factors as Derived from Stack Testing					Potential Controlled/Limited Emission Rates (tons/year)			
	VOC	Hydrogen Fluoride (HF)	Hydrogen Chloride (HCl)	Hexachloroethane	VOC	HF	HCl	Hexachloroethane
	lbs/lb flux	lbs/lb flux	lbs/lb hexachloroethane	lbs/lb flux	tons/year	tons/year	tons/year	tons/year
HMC-4 Flux (All 13 Furnaces)	0.0213	0.0000	0.924	0.0007	0.25	0.00	10.00	0.00
WF HB2 Flux (All 13 Furnaces)	0.0213	0.0143	0.924	0.0002	0.92	0.62	10.00	0.00
SF-350 Flux (All 13 Furnaces)	0.0000	0.2276	0.000	0.0000	0.00	9.38	0.00	0.00
Total Potential Controlled/Limited Emissions (tons/year):					0.92	<10	<10	0.00

\*\*Note: Based on full conversion of chlorine in the hexachloroethane to HCl, the total hexachloroethane usage is limited to 21,645 pounds per 12 consecutive month period. For purposes of determining worst case emissions from the flux containing hexachloroethane, the amount of flux used is assumed as the greater of HMC-4 and WFHB2, which respectively contain 93% (wt) and 25% (wt) HEX. Based on full conversion of the fluorine (21.614%, wt) in the non-chlorine flux (SF-350) to HF, the total non-chlorine flux usage is limited to 82,425 pounds per 12 consecutive month period.

## Pouring/Casting

TYPE OF MATERIAL	Total Potential Furnace Melt Rate	Total Limited Metal Production Rate								
	32.26 tons metal/hour	46,416.97 tons metal/year								
Aluminum										
	Emission Factors					Potential Controlled/Limited Emission Rate (tons/year)				
	PM lbs/day	PM10 lbs/day	SOx lbs/ton metal produced	NOx lbs/ton metal produced	VOC lbs/ton metal produced	PM tons/year	PM10 tons/year	SOx tons/year	NOx tons/year	VOC tons/year
New FLCA (A3)	7.79	7.79	0.02	0.01	0.14	1.42	1.42			
Existing ME-Cell (A12,A13)	12.92	12.92	0.02	0.01	0.14	2.36	2.36			
Existing Casting (A1,A2,A4-A11)	25.00	25.00	0.02	0.01	0.14	4.56	4.56			
Total Potential Controlled/Limited Emissions (tons/year):						8.34	8.34	0.46	0.23	3.25

## Sawing &amp; Trimming of Aluminum Die Cast Parts

TYPE OF MATERIAL		Control System Efficiency (%)	
Aluminum		96%	
	Parts Throughput tons/hour	Emission Factor	Potential Controlled Emission Rate (tons/yr)
		PM	PM10
		lb/ton metal parts	lb/ton metal parts
		tons/year	tons/year
New Die Cast Parts (A3)	3.00	3.44	0.41
Existing Die Cast Parts (A12, A13)	1.29	3.44	0.18
Existing Die Cast Parts (A1,A2,A4-A11)	2.5	3.44	0.34
Total Potential Controlled/Limited Emissions (tons/year):		0.93	0.93

## METHODLOGY

\* Existing facility information taken from original FESOP033-7938-00016, issued January 26, 1999, for aluminum melting at existing furnaces A4-A11, with pouring/casting and sawing & trimming PMPM10 remaining unchanged even though A3 from that original FESOP is replaced with new A3 which is separately evaluated herein; Significant Permit Revision No. 14858, issued January 4, 2002, for melting at furnace A12 & A13, and pouring/casting and sawing & trimming for A12 & A13; and Significant Permit Revision No. 15396, issued August 7, 2002, for melting at new replacement furnaces A1 & A2.

Emission factors for metal fluxing operations taken from May 1996 stack test report as presented in FESOP application, except HCl and HF. HCl emission rate of 0.924 lb/lb reflects full conversion of chlorine in the hexachloroethane in the flux to HCl emitted, based on MW = 36.46 (HCl); 236.72 (HEX), and 6 molecules of

HCl emitted per molecule of HEX (C2Cl6) used. Similarly, HF emission rate of 0.2276 lb/lb reflects full conversion of fluorine in the flux to HF, based on a maximum of 21.614% (wt) fluorine in the flux and MW = 20.006 (HF) & MW = 18.998 (F).

PM and PM10 emission factors for pouring/casting operations reflect daily upper limit threshold for "insignificant activity" (i.e., 25 lb/day), which was specified in the original FESOP and SPR No. 15396 applications for A1-A11, and as reflected in SPR No. 14858 for A12 & A13.

Other pollutant factors taken from USEPA FIRE database, version 6.23, for SCC 3-04-001-14.

Emission factors for sawing & trimming of casted parts are based on actual 1995 cyclone collection of 29,700 pounds PM, 96% collection efficiency, and 9,000 tons of production, as presented in original FESOP application.

## Appendix A: Secondary Metal Production - Aluminum

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Company Name: Citation Bohn Aluminum Corporation  
Address City IN Zip: 6378 U.S. Highway 6 West, Butler, IN 46721  
FESOP No.: 033-7938-00016  
Significant Permit Revision 033-16754-00016  
Reviewer: Michael Hirtler  
Date: March 2003

## PARTICULATE MATTER COMPLIANCE CALCULATIONS FOR NEW PROCESS OPERATIONS

The following process operations are subject to the particulate matter emission limitations pursuant to 326 IAC 6-3-2: reverberatory metal smelting, pouring & casting, and sawing & trimming of die cast parts.

Pursuant to 326 IAC 6-3-2, the allowable particulate matter emission rate, E (expressed in lb/hr) is determined as follows:

$E = 4.10 P^{0.67}$  for process weight rates (P, expressed in tons/hour) up to 30 tons; or

(Equation 1)

$E = 55.0 P^{0.11} - 40$  for process weight rates (P, expressed in tons/hour) in excess of 30 tons.

(Equation 2)

Emissions Unit	326 IAC 6-3-2 Process Weight Rate tons/hour	Particulate Matter Emission Rate (lb/hr)		
		Limited lb/hr	Allowable lb/hr	
New Reverberatory Furnace A3	6.00	13.62*	13.62	(will comply)
New Aluminum Castings (FLCA)	6.00	1.42	13.62	(will comply)
New Sawing of Die Cast Parts (A3)	3.00	0.09	8.56	(will comply)
Existing Casting (A1,A2,A4-A11)	18.01	1.04	28.44	(will comply)

Note: Allowable particulate matter emission rates (lb/hr) based on use of Equation 1.

\* This furnace will be required to stack test to demonstrate compliance with this allowable emission rate limit, since the uncontrolled AP-42 factor of 4.3 lb/ton results in an uncontrolled emission rate of 25.8 lb/hr.